JPRS 76847

20 November 1980

USSR Report

MILITARY AFFAIRS

No. 1545

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NAVAL TRAINING: ON THE 'RAZITEL'NYY'

Moscow VOYENNYYE ZNANIYA in Russian No 7, Jul 80 signed to press 9 Jun 80, p 1 and inside front cover

[Article and photo captions by A. Chernykh, Red Banner Black Sea Fleet: "One Day at Home Base"]

[Text] The escort vessel "Razitel'nyy", one of the best ships of the Red Banner Black Sea Fleet, returned to its home base following a long cruise on the Mediterranean Sea. It successfully completed its training missions, and now the crew awaits duty at the base. But it will not last long. "At home at sea, and a guest ashore"--this old slogan of the Russian seamen is a law of life and service to the seamen, petty officers, and officers of the "Razitel'nyy".

As with days at sea, the days at home base are filled with intense military labor. The crew's combat training ceases for not even a minute. Preparations for another cruise proceed simultaneously. All of the ship's services have many, very many concerns. The combat equipment must be adjusted and put in order, the work of instruments and mechanisms must be checked out, all supplies must be replenished, the results of the previous cruise must be summarized, and the future tasks must be planned. The results of combat and political training give cause for joy.

The "Razitel'nyy" took first place in the 1979 competition, earning the "outstanding" title. All combat training in tracking and hunting, and the certification fire exercises were completed with a grade of excellent, and these grades will be reconfirmed in the new year.

Credit for this belongs to the entire crew--from the commander to the common seaman. The Komsomol members worked especially well. After all, the Komsomol organization aboard ship is rightfully said to be the best in the formation. It is led by Lieutenant A. Anisimov.

"We are preparing Komsomol members for the party," he said. "Twelve people joined the party organization right after the cruise. The most worthy become communists."

The ship's crew is multinational and friendly. Young people from many oblasts and rayons of our country serve aboard. They came to the fleet by various roads, but they were all united by one desire--to become naval seamen. Many came after graduating from DOSAAF naval schools. Among them is Seaman A. Populov, a graduate of the Zhdanov Naval School. His term of service is coming to an end. But he has no plans for leaving the marine expanses to which he has become so accustomed.

"I will join the merchant marines, I enjoy sailing very much, and I have fallen in love with the sea."

In response to my question as to what it was that attracted him to the navy, Populov replied:

"I have always been attracted to travel, and aboard the "Razitel'nyy" I was able to sail the seas, visit ports in different countries, experience the violence of storms at sea, feel like a real man, and grow physically strong. Life in the navy is romantic. And the sea can be so changeable. Its color varies, and sometimes it can be cruel. Thus, everything I had dreamed of has come true!"

Things do not remain quiet aboard ship very long. The intercom system suddenly came alive with orders: "The emergency rescue group is to form up for training in 5 minutes." Life aboard ship is scheduled to the minute, and nothing can interrupt its usual rhythm.

The crisp orders from the commanders and their unquestioning execution by the seamen attest to the smoothness with which all of the ship's services were running. All scenario inputs were responded to quickly, in less than the required time as a rule. Life saturated with combat training leaves little time for the blues and boredom. After a hard day it is so nice to talk about loved ones and about home, to go into the city for a concert, or to simply stroll on solid ground that does not rock. Seaman L. Sebezhko, a Muscovite brought a package from a friend aboard ship with a happy smile. Had he sent something to the former cadet of the Moscow DOSAAF Naval School? New textbooks, most likely--Sebezhko was planning to enter the institute after service.

The ship's deck is always clean; nor can it ever be otherwise, since it is perpetually being swabbed by authentic nautical mops--the ever-present naval tools which every seaman becomes acquainted with sometime in his life. Cleanliness aboard ship is a special concern of the seamen. The deck shines in all weather, at all times of the day and night.

On this day, Seaman S. Yermolin, a graduate of the Omsk DOSAAF Naval School, was in the cleanup crew on the upper deck.

"The work was difficult at first," he admitted to me. "I used to get seasick, but now everything is alright, I've gotten used to it. I myself am from the town of Stanovka, and all of my friends from that town are in the navy. Two Nikolays--Nikonov and Novikov--are serving on the Pacific. They write to me often, and they have no complaints about their work. They have already earned short leaves."

During these days, in which the country is commemorating USSR Navy Day, the crew of the "Razitel'nyy" is performing a combat watch far from native shores. It is not easy work, but it is so necessary to all of us! It protects our peace, and the peaceful creative labor of the Soviet people, and it dependably protects the blue borders of the beloved motherland.

Photo Captions [photos not reproduced]

The "Razitel'nyy" at base.

Lieutenant A. Yegorov, commander of the emergency rescue group, explains the mission to his subordinates.

Gunner Petty Officer 2d Class K. Izayev, an outstanding soldier of combat and political training.

Lieutenant I. Anisimov, Komsomol Committee secretary, holds lessons with the active Komsomol members.

Flag raising ceremony aboard ship.

Petty Officer 1st Class M. Semashko and Seaman B. Zavarzin underoing training.

The fire crew in action.

Seaman A. Populov, a graduate of the Zhdanov DOSAAF Naval School, sounds the hours.

Petty Officer 2d Class V. Makeyev and Seaman S. Anisimov swab the deck.

The medical instructor in training.

Cook V. Skorokhod is happy: Lunch was good.

11004
CSO: 1801

NAVAL TRAINING: ON A NUCLEAR SUBMARINE

Moscow VOYENNYYE ZNANIYA in Russian No 7, Jul 80 signed to press 9 Jun 80, p 5

[Article by Warrant Officer V. Babich, Red Banner Northern Fleet: "We Serve Aboard an Atomic Sub"]

[Text] Our nuclear submarine sets out to sea. A steep dark wave rushes over the narrow deck with indifference, slamming against the high conning tower and rolling aside.

The native shore melts away relentlessly. The heart becomes heavy. Behind us we can see our foamy wake, the barely distinguishable lights of the pier, and the yellow searchlights--our last contact with home base. Before us we face long oceanic miles, an enormous column of water above our heads, and salt upon our lips. Not from seawater but from sweat: It can be no other way on a long cruise. Naval service is one day the same as the next, blistered hands and white stains on seamen's overalls, perpetual responsibility for one's area, and complete dependence upon one another.

A different situation would simply be unimaginable aboard a nuclear submarine. Day differs from night only in the schedule, and evening differs from morning only in the fact that the seamen see movies after dinner.

For several hours we proceed on the surface. The wavy ocean rocks the boat. Around us is a continuous grayish gloom, a thousand miles of barren expanses, and above our heads are stars like snowflakes. But in our submarine we feel stronger than the ocean. We do not fear the angry storms, and we are not frightened by the cold depths and the tremendous distances. Because we have been persuaded many times that our nuclear submarine, which was created by the caring hands of Soviet designers, engineers, and laborers, possesses remarkable navigational qualities and carries modern weapons. And the strength of the boat and its power are transmitted to the people, this I know from my own experience.

I dreamed of becoming a seaman from childhood, and I made my dream come true. But I never thought that I could get used to a submarine, in the bowels of which hundreds of highly complex instruments and mechanisms wink at each other in multicolored lights. I never thought I would see it as a living being. This remarkable feeling becomes especially keen when we spend weeks on end in the open ocean, far from native shores. During the lengthy cruise one seems to sense one's tie with the ship and with nearby comrades in a new way. Just yesterday there was someone you did not know, or even guessed that your fate would wind up tied in with him. But today he is aboard the submarine. And this is found to be enough to become a faithful friend. Such is the bent of life aboard this small and concurrently this infinitely large world of the nuclear submarine, aboard which the concepts of honor, naval friendship, and conscience are unique, special.

We proceed at great depth. The hull shudders slightly. It seems as if the ocean has stilled, that it is holding its breath. But that is only what the uninitiated might think. The ocean is alive, and it is protecting its secrets. Duty sonar operator Valeriy Nelyubin listens carefully to the breathing of the depths: He waits for a subtle sound that would give away the "other" invisible boat.

The sonar operator's work is painstaking, requiring maximum attention and patience. Try to sit for long hours by a sonar set, constantly interpreting the lulling sounds of the ocean. It is extremely tense duty.

I open the heavy door and communicate my question by nothing more than the expression of my lips:

"Well, how is it going?"

Rather than giving a verbal reply, 20-year-old Valeriy simply shrugs his shoulders. This means: Nothing new.

Seaman Nelyubin has become an outstanding sonar operator. But his proficiency did not come to him right away. During his first cruise we were faced by a most enviable task: We had to surmount the "enemy's" ship screen, reach our assigned area, and launch our missiles. Everyone was calm and efficient--we were used to the work. This calmness was also transmitted to Valeriy, who had just been certified for independent control of his battle station. But at the most critical moment he fell apart and, confused by the wealth of noises and interference rushing into his ears, he was late in reporting the target, and he failed to provide accurate data to the boat's combat crew in time. The "enemy" discovered our submarine.

Valeriy was not reproached at that time--he was young, after all, and there were still things he had to learn. But naturally Nelyubin was disturbed. He turned inward. On finishing his shift, he would immediately hit the books, the diagrams, and the tape recordings. And all on his own! He categorically rejected any help: "I'll figure it out somehow, I'm not a dummy...."

Time passed, and his previous mistakes were soon forgotten. But the memories returned with the next fiasco:

An exercise was going on. Nelyubin was on duty. He hurriedly rotated the knob of the compensator, but he could catch nothing but the sounds of the sea. His heart was pounding with alarm: Something is not right--there are many ships above!

Suddenly through the chaos of sounds there appeared one--a delicate, penetrating sound.

"I can hear a submarine's sonar set," he immediately reported.

Crew chief Warrant Officer Danilov immediately ordered him to determine its frequency. But the operator's attempts at placing the frequency within a certain range were unsuccessful. He cast a confused look at the warrant officer, and the latter smiled:

"Why so gloomy? You think it's a sonar set? You're right. But not a submarine's. A dolphin's! Remember: So that you don't make any more mistakes from here on out, you must learn the sea's sounds well. Then your work will make sense. It's a lot easier for radio operators, for example. After all, they need only catch a single signal out of the chaos of sounds and interference--the work of the transmitting station. A sonar operator, however, must determine what object is emitting the sounds on the basis of his knowledge of the typical noises of the sea, and if it is a ship, then what kind."

Once again no one said to Valeriy: "Change your specialty before it's too late, you'll never become a sonar operator, and some day you'll let us down." Naturally the relationship between the seaman and his comrades changed--they began to be stricter with him when he made mistakes. And the crew chief gave him inspiration: "Deep in the sea, 'combat' begins with the sonar operator. Under otherwise equal conditions, the boat with the most skillful sonar operators wins."

Now all of that is behind. Valeriy has become a virtuoso in his work. He confirmed this in the last exercise.

A training alarm pierced the silence. The boat was trapped in electronic pincers. We could see from the navigator's plot that surface ships were coming ever closer toward the boat from different sides, and the "voices" of their sonar sets were becoming louder and louder. And this growing loudness meant a growing threat. The noises of antisubmarine ships could be heard from far away. The boat came cautiously closer to them without straying into the effective zone of their detection resources. The duty sonar operator constantly reported target data, trying to track the movements of the targets so that the navigator and commander would not be misled.

To break out! To break out of this invisible net at all costs! This was the task faced by the commander and the entire combat crew. And everyone understood that now, in these minutes, the fate of the breakthrough could be decided by the accuracy of the work of the sonar operators, who were determining the range and bearing to the target, and by the efficiency of the navigator, who was plotting the courses of the boat and its pursuers on the surface. And, to the decisive degree, by the maneuver undertaken by the commander. His features were tense as he leaned over the navigator's maps, and his eyes, staring downward, could see what was now happening up top, beyond the pressure hull and the water column.

One of the ships seemed to be "sitting" right on the stern of the submarine: Its range and bearing had already been constant for several minutes. During these seconds the crew of that ship was feverishly computing the submarine's course and speed, and preparing for an attack: The roar of depth charge throwers, which could not be heard down below, could herald our destruction at any moment.

But we were not to be dealt with so easily! In a few minutes it became clear that the submarine had slipped away from the attack. The commander artfully led it away from the keen-sensed surface ships, and the pulses from their sonar sets became weaker and weaker, until they finally disappeared.

We struck a deep course at high speed. For a certain while the sonar operators reported the same thing over and over: "The horizon is clean." Minutes of extreme tension ticked by without end. And suddenly a new report came from the sonar room: "I hear the noise of a cruiser's propellers on the right."

The siren sounded the alarm in the compartments, and the loudspeakers of the intercom came alive: "Training alarm! Torpedo attack!"

The boat began approaching the "enemy". The combat information post and the sonar operators determined the precise course of the target, and its range and speed.

The cruiser was traveling at full speed in an antisubmarine zig-zag pattern. Our nuclear submarine performed a complex maneuver. In the blind. This was difficult, but the commander was relaxed: This was not the first time.

The submarine assumed a battle course. The faces of the seamen froze beside the instruments and the launching buttons. In a few minutes the ship would be within range.

Within range! How difficult and long the path was before this point! The crew had spent many days and nights at sea. There had been hundreds of various exercises and training sessions. There were competitions in standards and tasks in all of the compartments, and the work was tiring to the extreme. And now the culmination of it all--a torpedo attack.

"Torpedoes! Fire!"

The boat shuddered slightly twice, virtually as if shaking off a burden. The "cigars" noiselessly slipped into the cold waters of the ocean, leaving behind the bitter odor of compressed air in the compartment. And immediately the voice of the battle station commander resounded in the central control post:

"The torpedoes are out. No report."

Once again weary seconds dragged on.

"I hear the torpedoes, Comrade Commander!" Valeriy Nelyubin's voice broke into the silence of the central control post.

"The noises of the torpedoes and the cruiser are coming closer together."

Then he reported:

"The noises of the target and torpedoes have merged...."

The ship commander wiped his brow and smiled. His task was finished: The cruiser was "sunk". But the "battle" was not yet finished. The sonar operator reported appearance of "enemy" antisubmarine ships. The boat dropped to great depth, set out interference, maneuvered, and detoured away from the dangerous area. The noise of the propellers of the pursuing ship gradually ebbed away in the earphones. The duel lasted several hours, but it was only a few seconds from the "torpedo attack" signal to the moment the strike was made.

The heavy column of water concealed the submarine, exhausted from the "battle". And it was only after the commander made sure that he won the duel that he gave the command to surface. The crew could finally breathe again.

The sonar operators were the first to enter into "battle" and they were the last to leave. Such is the nature of their work. And while I do not belittle the credit deserved by my other comrades, my first bow of gratitude goes to them, the sonar operators.

11004
CSO: 1801

CIVIL DEFENSE: TRAINING AND RELATED ACTIVITIES

In Ivano-Frankovskaya Oblast

Moscow VOYENNYYE ZNANIYA in Russian No 7, Jul 80 signed to press 9 Jun 80 pp 14-15

[Article by V. Mironov and V. Kharin, Ivano-Frankovskaya Oblast: "Integrated, With All Resources"]

[Text] The collective headed by director V. Avgustimov (Ivano-Frankovskaya Oblast) justifiably is proud of its production successes. In spite of a rise in production tasking, workers and employees pledged to complete the plan of the 10th Five-Year Plan by USSR Constitution Day. Dozens of them fulfilled their personal tasks ahead of time--by the 110th anniversary of V. I. Lenin's birthday.

It is proper also that many production leaders are civil defense [CD] activists, for here problems of protection against mass destruction weapons are solved along with production tasks. Good protective structures, which rationally are being used for economic and for training purposes, have been built for the workers and employees. A great deal has been done to improve the quality of CD training provided to the supervisory staff, civilian formations, and all workers and employees. Exercises, practical training, and lessons are conducted strictly according to plan. Moreover, the attention of the leadership, supervisory staff, and of the entire society is riveted on insuring that this training is conducted on a high level, that it facilitates development of firm skills and of skillful and confident actions. Seminars with shop, department, and section chiefs, with masters and brigadiers, with party organization secretaries serve these purposes. Directives on training and indoctrinational work and on accomplishment of pressing CD tasks are issued during such seminars. The CD chief analyzed progress in CD training during one such lesson and recommended ways to improve it.

Also, the party committee regularly raises these questions at seminars for the secretaries of shop party organizations and of civilian formation political deputies. The enterprise party committee, the trade union, Komsomol, and other public organizations continually concern themselves about cohesion in the collective and indoctrination of each installation worker with profound ideological conviction, political vigilance, and a readiness to come to the defense of the motherland, of the revolutionary conquests of socialism.

Well-organized socialist competition is an important mobilizing stimulus for successful accomplishment of CD measures. CD indicators here are included among the basic indicators and are taken into consideration when summing up results of economic plan fulfillment. Broad possibilities for mutual examination of competitors have been suggested. Representatives of all the plant's public organizations are included in the commission which summarizes competition results. Monthly it determines the victors in a pair of similar shops and in the groups of main and auxiliary subunits. They award them diplomas, a travelling Red Banner, and cash prizes. Competition progress is reported in the plant newspaper and on the radio. Pictures of those who excel are placed on the Board of Honor and exhibited in the Gallery of Labor Glory. Trips to hero cities are arranged for competition victors.

Based upon last year's results, the victors in socialist competition were the collectives in Shop No. 6 (chief V. Banasevich, party organization secretary M. Vrublevskiy, shop committee chairman L. Sorel') and Shop No. 9 (chief V. Buglak, party organization secretary V. Savlyak, shop committee chairman V. Skvortsov). Know-how in competition organization at this installation has been passed on to the sector. The chief of the main administration awarded a prize to F. Veyde, chairman of the plant trade union committee, for his great personal contribution to the CD competition and to development of training facilities.

Competitive reviews also are conducted at the installation annually for the best presentation of mass-scale defense work, including CD as well. All public organizations participate in military-patriotic indoctrination, using for this purpose heroic examples from the military life of the veterans working at the enterprise. Both the plant's youth and its labor veterans visit museums of combat glory. Komsomol members made a 3-day trek along the partisan paths of Kovpak's formation. Plant-wide farewells to Soviet Army draftees and correspondence with unit commanders and personally with former fellow workers have become a tradition.

The plant Komsomol committee led by V. Batyuk does this work in close harmony with the council of war veterans and USSR Armed Forces veterans, with the council of tutors, with the installation CD staff, with the DOSAAF committee, with the Znaniye [Knowledge] Society primary organization headed by N. Gorbunova, and with the Red Cross committee. Communist A. Chuchulin, a reserve officer and chairman of the veterans' council, is known at the plant as a good tutor and indoctrinator of youth. His speeches resound at Lenin lessons, at political information sessions, at Komsomol meetings, at museums, at youth meetings with war and labor veterans. Being secretary of a shop party organization, he steadfastly achieves quality accomplishment of CD measures and active CD propaganda.

The DOSAAF aktiv jointly with the CD staff and other public organizations under party committee supervision does a great deal of work on military-patriotic indoctrination, CD propaganda, and preparing youth for service in the country's Armed Forces. For this they use the training facilities jointly--the training village, blast shelters in which the training post is located, the firing range, classrooms for lessons, the lecture hall, sound and movie equipment, dosimetric instruments, and the technical sports club. They set up displays, photo montages, and CD corners in shops and sections.

The plant's DOSAAF committee occupies first place in the oblast in training specialists for agriculture. For example, in 1979, the training of drivers exceeded the plan by a factor of almost 2. Parachutists, radio telegraph operators, and communicators also are trained here. Moreover, young girls are eager members of many groups. Competitions in types of sports applicable to the military include CD elements, as a rule. Actions in response to CD mobilization signals and GTO (Ready for Labor and Sport) norms are worked out. Chief of the installation CD staff R. Shagalov, plant DOSAAF committee chairman M. Gabanov, and the defense aktiv organize with the youth lessons on protective equipment and dosimetric instruments, as well as practical training in blast shelter maintenance, reconnaissance, and medical elements.

This work especially is vitalized during preparation for and conduct of CD exercises, days, weeks, and months. Many CD measures and work on military-patriotic indoctrination were accomplished during a mass-scale defense month dedicated to the 110th anniversary of V. I. Lenin's birthday and the 35th anniversary of the Soviet peoples' Victory in the Great Patriotic War. Displays of CD materials and exhibits of civilian formation equipment were set up. Meetings of activists with the population and school children were held. Lectures and movies on CD and on military-patriotic themes were presented. All told, approximately 30 events vice the 6 initially planned were held during the month.

The necessity unswervedly, conscientiously to fulfill their constitutional duty to defend the fatherland, to demonstrate constant vigilance, actively to strive to improve practical CD skills clearly is explained in conversations with school children, the population, workers, and employees.

Medical personnel from the plant polyclinic and from the Red Cross organization headed by A. Pylypiv, chief for the standardization section, along with the CD staff and the DOSAAF committee, actively participate in the training of medical teams and medical posts. Corpsman G. Kochan, director of the medical point, made an especially notable contribution here. Each year she trains more than 50 percent of the installation's medical team members. Moreover, also she will teach scouts and rescue personnel drills in administering self help and mutual assistance. M. Astaf'yeva at the plant is considered rightfully a medical team instructor and socially active tutor. When she headed Shop 10's medical team, always it was ranked among the best. And now she is helping doctors to train their young friends, to indoctrinate them with esprit de corps, collectivism, a readiness at any time to come to the aid of the sick and injured. The plant health university also is helping a great deal to increase medical team theoretical knowledge. Team members eagerly visit there; the strongest forces from the oblast health department are invited in, too. Other forms of medical team training are used along with exercises and practical training sessions. The medical aktiv monthly conducts sanitary-hygenic and preventive measures, sets up a commission to inspect the operation of the plant dining room, participates in sanitary and health improvement measures in the streets and yards of the affiliated microregion, gives lectures, agitates for additional donors, and prepares visual aids on medical subject.

The blast shelter maintenance section commanded by S. Stepanyuk also is recognized as the best in the oblast.

These people, leaders and activists in CD and in military-patriotic work, are described in thematic sections of plant papers and on radio programs.

The installation technical library also makes its contribution to CD propaganda and to CD literature and textbooks. Library director T. Koval'chuk organizes mobile CD literature exhibits in the shops, presents her reviews in the plant newspaper and on the radio.

Lectures, talks, and movies have become a viable method of CD propaganda. They are presented by the CD section of the Znaniye Society usually prior to and following the work shift according to a plan approved and supervised by the party committee. Visual aids and technical propaganda means widely are used here. Propagandists supplement their knowledge in a young lecturer's school headed by M. Ryzhov, deputy party committee secretary for ideological work, and during seminars. Each lecture on a military-patriotic theme and on CD is accompanied by advisory material. It briefly describes the humane essence of CD, the fact that the country's entire population accomplishes these missions, that everyone must know how to protect themselves against mass destruction weapons, how to aid the injured, how to do rescue work. The idea is advanced here that these skills and this knowledge can be required not only in wartime, but now as well, in the event of natural disaster or production accidents.

Then, this happened--nature tore down an electric power line, washed away the pylon. People through deeds demonstrated their readiness to operate in a difficult situation. Emergency lighting--a diesel unit--immediately went into operation and fed the ATS [automatic telephone exchange] in order to maintain command and control. The technical emergency team was divided into sections to clean up after the accident on the spot. But, the main thing was to replace the pylon as rapidly as possible. The urban power network lacked specialists. Volunteer electricians like the brothers Nikolay and Petr Gorali and Vasiliy [illegible] were summoned. Headed by Valeriy Biryukov, commander of the technical emergency group and chief of Shop No. 4, for almost 2 days, replacing each other, they worked using a safety belt in the icy water until power was restored.

This and other examples of exceptional conscientiousness, of excellent fulfillment of their civil duty, and the entire complex of mass-scale political work carried out at the installation mobilize youth to shock labor, indoctrinate each worker and employee with a sense of responsibility for the fate of the motherland, of their enterprise, convince them of the necessity to acquire CD skill and military knowledge. Thus, Komsomol members in Shop No. 10 (secretary S. Sopushinskiy), in honor of the 110th anniversary of V. I. Lenin's birthday and the 35th anniversary of Victory in the Great Patriotic War pledged during CD training to assimilate drills on administering first aid. The enterprise supervisory staff, party committee, plant committee, Komsomol committee, and other public organizations approved and supported this initiative. Medical personnel from the plant polyclinic, the Red Cross, medical team personnel and the plant's entire mass-scale defense aktiv are helping the Komsomol to accomplish it.

"In accordance with the CPSU Central Committee decree 'On Further Improvement of Ideological and Political-Indoctrinational Work'," says party committee secretary V. Filippov, "we are paying special attention in the final year of the five-year plan to indoctrinate workers with the example of Lenin's life and activities, with the combat and labor traditions of the Communist Party and the Soviet people. Much remains to be done to improve indoctrinational work, the psychological tempering of the troops in civilian formations, in generalization and propaganda of progressive know-how. We think that sociological research--study of the moral-psychological microclimate in worker collectives--to a certain degree will aid in solving this problem. We are just beginning to do such research. But, early on we were convinced that similar analysis facilitates an increase in mutual demandingness and mutual trust in the collective, concern about each other, responsibility for the common cause."

"The secretary is correct," concluded installation CD chief V. Avgustimov. "We must strive so that CD training helps in development of the skills to operate under difficult conditions. The fact that the collective is convinced of the immutable tie between accomplishment of CD missions and of production plans, of the installation's social development, can be considered a plus from the goal-oriented work of the plant administration, party committee, and public. Each in his own area senses a responsibility for quality accomplishment of defensive measures. Evaluating the evolving international situation, especially recent facts, Leonid Il'ich Brezhnev when he was awarded the Lenin Prize called upon the Soviet people to keep their powder dry, to be firm and consistent in supporting the cause of peace. This obliges us to work even better, to avoid shortcomings, to concentrate attention on unaccomplished missions."

In the Moscow Area

Moscow VOYENNYYE ZNANIYA in Russian No 7, Jul 80 signed to press 9 Jun 80 p 16

[Article by Col S. Bystritskiy: "Against Formalism in Training"]

[Text] After a CD lesson conducted in ZhEK [Housing Operation Office] No. 9, Kuntsevskiy rayon, city of Moscow, the trainees, mostly pensioners, did not hurry home. They posed questions to their supervisor, exchanged opinions, and asked to be involved in such lessons more often. The CD staff and ZhEK chief V. Ozerov organized this lesson and ahead of time notified the pensioners and householders about the time and place the training group was to meet. The people who filled the well-equipped, clean, and homey classroom were supervised by qualified specialists: CD course teacher D. Sobolev and doctor A. Glushko.

It should be stated that all trainees gained practical skills in administering first aid to the "injured" and learned to make the simplest devices to protect the respiratory organs. But, the main thing was that again they were convinced of the necessity to know how to protect against mass destruction weapons.

Group leader Lesya Petrovna Marchishin (ZhEK No. 31, L'vov) conducts such lessons in an interesting and methodologically skillful manner. She seriously prepares all subjects and skillfully compiles lesson plans. For example, during the lesson on individual protective equipment, she did not get carried away with verbiage, but strived to allot a large amount of time for practical training in its use. And, she succeeded because the procedure for conducting the lesson and the logistic support was thought out well. The lesson concluded with a movie, which aided in refining individual details and, overall, making the trainees' knowledge more profound. Apparently the high attendance in this group is not accidental.

Lessons are conducted at a sufficiently high level where housing operations organization CD staffs and chiefs pay requisite attention to training the population in protection against mass destruction weapons. Their attitude towards CD measures depends upon whether the supervisor's authority vis-a-vis the trainees is established, whether he convinced them of the necessity for CD, whether he taught them to operate if the enemy attacks or in centers of destruction. Thus, the importance of assigning knowledgeable, vigorous supervisors to conduct the lessons.

In most cases, housing authority CD chiefs enlist the aid of reserve officers and sergeants, the party and Soviet aktiv, as well as their regular workers. And, they are correct in so doing. Moreover, in some cases, training of the population not occupied in production or in the service sphere is foisted off completely on superintendants (ZhEK No. 2 in Blagoveshchensk, ZhEK No. 3 in Khmel'nitskiy). This is easy, but not always successful. Easy, because these individuals always are on the job, it is easy for them to supervise. Unsuccessful, because not all are capable of rapidly becoming instructors, plus the scope of their duties always is expanding. Experience shows that the proper approach is to use these individuals to assist lesson supervisors (assembling the trainees, collecting textbooks, preparing training positions).

As is known, lesson supervisors are trained at CD courses, where they get the required minimum knowledge. But, they become educational specialists much later--during practical work. Many CD chiefs relax after getting these comrades a billet in the courses and take no further interest in how they fare. But, there is a need for each training group supervisor always to get specific support from his CD staff and chief, as well as from rayon staffs. Maximum training effectiveness must be achieved in each training group through practical lessons and maximum use of allocated time.

But, sometimes training time is not used productively. Thus, the explanation during study of individual protective equipment was extraordinarily detailed, albeit at times confused, for one such group from ZhEK No. 3 in Khmel'nitskiy. In particular, the supervisor himself was unable to differentiate between the GP-5 and the GP-4u gas masks. And, in ZhEK No. 5 in Ivano-Frankovsk, there was a discussion during a lesson on how to fill out an evacuation identification card that had long since been replaced.

Viable supervision over training quality and specific help to those who need it, analysis and a creative approach to ways of improving the training process, are required so there will be fewer instances like those described.

It goes without saying the DEZ [housing evacuation elements], ZhEK, and housing directorates are not able always to solve this problem independently. CD staffs and courses must assist them. Here is an example. In Kuntsevskiy Rayon in Moscow last year, teachers from these courses gave demonstration and instructional methods lessons in 17 ZhEK. Here, they used their auto club always: at the club they set up a CD exhibit and showed training films. Unquestionably, training group supervisors took a great deal upon themselves, they exchanged opinions, and this did much to improve organization of the training process. Specific concern about improving their methodological proficiency also is demonstrated here. At the same time, closer businesslike contact is being established with housing institution chiefs.

What is the ZhEK role? The idea is that it is proper that chiefs of ZhEK CD staffs call together the training group supervisors for a brief period, inform them of the requirements contained in CD norm-setting documents, and explain the procedure for evacuation and shelter in protective structures,, as well as other measures. This would allow us to avoid "bare" theory. It also is advisible for them to arrange an exchange of opinion with training group supervisors and, with help from the CD courses, conduct demonstration and instructional methods lessons.

A formal approach to organization of the training of the non-working population is encountered at times. For example, take the manning of the training groups. The program recommends groups of 10-12 people, taking age, state of health, and educational level into account. But, ZhEK No. 2 in Blagoveshchensk includes 30-40 people in a group. R. Nosovoy counted 93 people in the group led by the superintendent of neighboring ZhEK No. 3. It goes without saying that there is no semblance of practical training as a main approach in this event. No need to mention the difficulty of gathering together such an audience. And, it is no accident that attendance barely exceeds 30 percent there. Consequently, only about one-third of the pensioners and householders living in these homes are involved in the training.

The problem of lesson attendance must trouble the applicable CD staffs and their chiefs. If attendance is low, apparently there are reasons for this. They must be identified and measures taken to eliminate this serious shortcoming. One such reason is poor selection of training location. It is advisable that each training group secure a permanent place as close as possible to where the trainees live and determine the time most suitable to them. The place must be clean and well ventilated. We need to remember that we are dealing with senior citizens.

Often, ZhEK CD chiefs, given the availability of their own blast shelters, red corners, or lecture halls, organize the training of their workers and of the non-working population there. For instance, the plan at ZhEK No. 5 in Ivano-Frankovsk is to train 880 people in the red corner and the blast shelter. The amount of discomfort arising in such a case is understandable. But, O. Olenyuk, CD chief at ZhEK No. 31 in L'vov, set up the training process in a somewhat different way. She arranged a place for each group, used training facilities in the general education and the vocational and technical schools, plus the Houses of Culture near where the trainees reside. Lesson days and times were coordinated with the CD chiefs at these locations. This approach to the task facilitates broad involvement by the population and increased lesson quality. Wider use also must be made of CD courses and national economic installations as a foundation, including training villages and posts, protective structures, and classrooms.

In a Kishinev Plant

Moscow VOYENNYYE ZNANIYA in Russian No 7, Jul 80 signed to press 9 Jun 80 p 18

[Text] The young Kishinev Refrigerator Plant ranks among the pacesetters of Moldavia's industry. In the final year of the five-year plan, the plant collective successfully is accomplishing tasks and confidently heads for the finish line.

Work to improve CD has been established well at the enterprise. It is notable that it is done in an integrated way here, shoulder to shoulder with the collective's vital functions, with the ideological-political, labor, and moral indoctrination of the individual--the motherland's worker and defender. As is always the case, the progressive people in production also are activists in defense work.

I had occasion to observe an integrated exercise at this installation and to become convinced that the results achieved in the collective's and the installation's CD training primarily were due to the fact that the plant's party organization and supervisory staff follow a course towards constant improvement in the quality of the entire training and indoctrinational process. They steadfastly see to it that CD problems are solved in an integrated and responsible way.

"Naturally," Nikolay Ivanovich Chepurnoy, the plant CD chief, explained to me, "in all of this the mood is set by chief of staff Sergey Naumovich Sirotyuk, a communist, a colonel in the reserve. No need to look into his knowledge and know-how. Just familiarization with his biography convinces you that he belongs to those that life itself intended to be on the forward edge of the battle area."

A working lad from Vinnitsa, a printer, a Red Army man since 1939. He was in the Kiev area when the Great Patriotic War began. He was wounded several times in bloody encounters, but he returned to the fray each time. He successfully completed military school in 1943. The front-line route the young officer covered subsequently passed through the Kursk Bulge, across the steppes of the Ukraine, through the Carpathians, Hungary, and Austria.

...December 1944. Fierce battles are underway in Budapest. The battalion Capt S. Sirotyuk commands is fighting in the eastern part of the city. Step by step, the battalion advances, block by block it clears the city of Hitlerites. By 18 January, Sirotyuk's warriors had destroyed 10 enemy tanks, 9 armored personnel carriers, and 35 guns, had exterminated and captured hundreds of Hitlerites. The valorous captain soon became a regimental commander and the motherland awarded him the Gold Star of a Hero of the Soviet Union. Sirotyuk's military courage also was recognized by other combat orders and medals.

...1970. Sirotyuk is at the refrigerator plant. He thoroughly studied the situation. And, along with the director, he assembled the command-supervisory staff of the formations for a meeting on instructional methods. It was memorable for many. From a position of great demandingness the pluses and minuses were investigated, specific tasks and the ways and suspenses for accomplishing them were determined, the question of unity of training and indoctrination was posed. And, special emphasis was placed on studying the people, their needs, their moral-psychological mood. Then, they listened to the chief of staff at an expanded meeting of the plant party bureau. A businesslike, probing conversation ensued on the lofty responsibility of shop and section communist supervisors.

A seminar was held immediately thereafter with the formation political deputies. Problems of military-patriotic indoctrination and CD propaganda were discussed at a meeting of the plant's ideological aktiv. Shop party organizations and the trade union, Komsomol, and DOSAAF committees began actively to get involved with CD problems.

The chief of staff systematically improves his level of professionalism. He visits training methods seminars at the rayon CD staff and courses; he enriches himself with progressive know-how. And, he teaches plant CD personnel himself. Not too long ago, he gave a lecture entitled "The Military-Technical Revolution and CD" during a lesson in the commander's training system. Continually, he ponders at lessons, competitions, and exercises about the effect they have on people, what new things will be furnished for formation and development within them of moral and fighting qualities. For example, let's take the medical aid team led by design engineer G. Alekseyenko. It is known that rapid administration of first aid to the injured and their pick up and transportation from centers of destruction are senseless without good physical tempering, a state of training honed to the point of automation of professional skills, without moral-psychological steadfastness. Therefore, organizing medical aid team training, the staff does everything necessary to see that team personnel acquire such qualities as strength, agility, decisiveness, bravery, resourcefulness, and speed along with special knowledge and skills. And, it is no surprise that the medical aid team for many years has been a prize winner at rayon, zonal, and republican competitions.

Or, let's say, the personnel of the formations commanded by the supervisors of progressive shops L. Grigory'yev and D. Badyan, senior master D. Litvak, section chiefs M. Saktser and R. Vasilyets, shock workers of communist labor fitters I. Tratsevskiy and I. Tsurkan who, along with an excellent mastery of their direct responsibilities, also are able to fulfill tasks of a different nature: administer first aid to the injured, extinguish fires, save the drowning, repair minor damage to public power networks, clear paths and passages.

It is recognized that all this requires the corresponding training facilities. The model training post is Sergey Naumovich's pride and joy. Displays, many photo montages and posters, special literature library, and various training equipment have been set up in a knowledgeable way. Beautifully-lettered socialist pledge lists and portraits of those who excel in CD have been put up. A permanent movie projector is available. There are CD corners and displays in each shop. The training facilities mature and are improved during training and during CD exercises, competitions, days and during other mass-scale defense measures. And, CD staff workers, formation commanders, political deputies, and the troops temselves are doing this.

Demanding of himself, comrade Sirotyuk also is demanding of others. Visiting lessons one time, he noticed that group supervisors E. Bal'birer and B. Tsioma were conducting them at a low level. The chief of staff not only reprimanded them accordingly, but also saw to it that this was discussed by the party bureau.

Sirotyuk generously shares know-how with colleagues and speaks at meetings and seminars on training methods in the rayon and in the city. Recently, he discussed his know-how via republican television.

The war hero remains in the ranks during peacetime, too. He is making his meaningful contribution to the sacred cause of strengthening the might of the beloved fatherland.

Medical Aid Team Training

Moscow VOYENNYYE ZNANIYA in Russian No 7, Jul 80 signed to press 9 Jun 80 pp 20-21

[Article by A. Tarasenko, surgeon: "Businesslike Advice Instead of Secrets"]

[Text] In recent years often I have been tasked to prepare our best medical aid teams directly for high-level competitions. In particular, I was involved with famous Moscow teams from two CD installations. One won the All-Union Competition (1970) and excelled at the international contest (1974), the other won the All-Russian Competition (1978) and departed in the fall of 1979 to meet the medical aid teams from the fraternal socialist countries in the Polish People's Republic. Now the question is--what is the secret of success?

A specific goal was established--polish knowledge and skills the team members acquired during planned training at their own installations. It should be stated that these were well-trained teams possessing much competition know-how. The task was to eliminate minor faults in their actions, refine several details, adjust the distribution of forces, elevate the combat and moral spirit, and instill a belief in victory.

What special things did I succeed in imparting to the training at the concluding stage? It is difficult to answer that question simply. If any secrets exist, they should be brought to light for the general good. But, since there are no secrets, I therefore will restrict myself to businesslike advice which, in my view, is required both for medical aid teams and for lesson supervisors, both during daily training and when preparing for exercises and competitions.

What qualities, other than firm special skills, must a medical aid team possess in order to expect to win, place, or show? First, a lofty sense of civil duty and personal responsibility for your own level of training. These are taught during planned training. A doctor working with team members must get them interested, must insure they achieve a firm grasp of the knowledge and the skillls to apply this knowledge in practice.

It is very important that the team be engulfed by the attention of the administration, party committee, the Komsomol, trade union, and DOSAAF committees, the CD staff, and the Red Cross. Undoubtedly, this is the key to success. Such help must be timely, however. The personal attention of the installation supervisor is an especially good stimulus. Medical aid team members experience great moral satisfaction when he visits their lessons, learns about their needs, aids in overcoming difficulties, and remembers to give them encouragement. All this facilitates forging the team into a unified combat collective.

This very situation of concern and attention has been created at those enterprises whose honor the aforementioned teams defended. At all the high-level competitions they demonstrated collectivism, mutual assistance, recognition of the responsibility for their performance, and healthy rivalry during the struggle, along with the ability rapidly and correctly to administer first aid.

It should be said that they trained at their own installations under conditions that can be created everywhere. They studied the same textbook everyone uses. In addition, they used M. I. Gogolev's textbook "Organizatsiya raboty sanitarnykh druzhin v ochagakh porazheniya" [Organization of Medical Aid Team Operations in Centers of Destruction] ("Meditsina," 1978).

However, as life deomonstrates, preparation for participation in competitions, especially high-level ones, requires additional time. Where do you find this time? Only from your own free time. In actuality, that is the approach teams that want to win take. And, there is never an instance when they complain about this because they understand well that resultant knowledge and practical skills can be put to use in many of life's situations: at work, away from home, within the family, in all instances when administration of first aid is required rapidly, skillfully, and in time. An understanding of this stimulates team vitality. It is this clear recognition of goals that must be achieved by everyone who trains medical aid teams at installations.

My many years of experience allow me to affirm that it is desirable to call upon a surgeon, a traumatologist, in this case a person who is enthusiastic as well. This is easier to do at large enterprises, where there is a medical unit or polyclinic.

What is expected of a doctor assigned to work with medical aid teams? Naturally, along with firm special knowledge, the ability eagerly, clearly, precisely, in a qualified way to demonstrate all practical procedures envisioned by the program. It is fine if he also has good instructor skills. It is a painstaking business and requires steadfastness, purposefulness, and personal involvement. It calls for the doctor and team members to study during working hours, as well as during their free time. The doctor must explain to his pupils the demands to be made upon them at the competitions. To accomplish this, he must know completely all the details contained in the Statute on Competitions. He must convince every participant that firm mastery of theoretical material and acquisition of practical skills only are possible through diligent labor and continual practical training. And, it goes without saying that the doctor must, through the process of the struggle and the rivalry at competition itself, fill the women with a desire to win a prize, to defend the collective's honor. Certainly, the competitions are not an end in themselves, but are a very effective means of checking the readiness of CD medical formations.

I note with regret that we still have not established, as we must, centralized training of doctors specially for training medical aid teams. The times call for this to be done.

Now for an in-depth look at the role of the medical aid team commander. As a rule, the team member who is the strongest in a theoretical and practical sense is assigned as commander. This is a leader that sets the overall tone and who leads the others. The doctor places special attention on this person's training. The commander is the one who will supervise all activities during competitions, exercises, and in an actual situation, should one occur. He must have detailed knowledge of the strong and weak aspects of his subordinates and, in accordance with them, skillfully assign functional responsibilities to each and assign each throughout the work sectors.

In the process of preparing for competitions, it is very important that the slightest mistake by the commander be corrected in time and in the presence of the team. Obvious correction of all errors in front of all participants helps to prevent them from recurring. A well-trained commander will be able to correct the errors of subordinates (this is permitted while competitions are in progress) and, in so doing, will preclude receipt of penalty points.

A commander must be able to issue precise, loud, clear commands, so emphasis is placed on development of this skill. This ability guarantees that all commands will be heard, understood, and rapidly carried out. A precise command, by the way, always makes a good impression on the judges. Of course, the commander must know the team's equipment well in order to employ it skillfully and correctly.

The political instructor is the first assistant commander, especially where harmony of the collective and its striving towards the common goal are concerned. He also must study the capabilities of each team member and must not take a back seat to the commander in respect to theory and practice and how to use his knowledge during the training process and when directly preparing for exercises and competitions. The political instructor can give the commander advice on extrication out of a particular situation. It is very important for him to have the ability to find an individual approach to every team member to attempt to eliminate weak aspects in a cordial, unprepossessing way (after lessons or in a domestic situation). For example, Galina Konyashkina, political instructor for a medical aid team at a scientific research institute, often hosted team members requiring more training at her home. Here, they worked out the more difficult first aid practical drills and practiced rapid and correct application of a tourniquet and bandages, putting a gas mask on an "injured" person, and so on. It should be noted that family members playing the role of "injured," often are of great help to medical aid team members.

Political instructor activities also are evaluated based on content of working diaries and visual aids. Therefore, a leaflet extolling team activities should be regularly published, especially during times when the team is preparing for exercises and competitions. The political instructor primarily is responsible for publishing such leaflets and greatly determines their nature and style. A humorous tone, light criticism, and friendly caricatures greatly facilitate the success of the leaflets.

A great deal depends upon logistics in team activities and the orderly is responsible for this. The orderly is called upon to demonstrate personal initiative, stubborness, and steadfastness in acquisition of supplies, which insure quality lessons. Therefore, the job of orderly must be assigned to a calm, authoritative woman. This is true for a team collective and for installation supervisors.

I would like to say a few words about the discipline of medical aid team members, about their responsibility in all deeds and actions to support the authority of the commander and of the political instructor. Anything can happen at competitions. But, one must firmly assimilate the fact that any arguments, complaints, and caprices absolutely are unacceptable. This involuntarily alerts the organizers and judges, therefore bringing harm to the team. Team members always must remember that they are defending the honor of the collective, that their strength lies in their very harmony, self-control, and moral-political and psychological tempering. And, if anyone feels that a particular judge is not fair, that an opponent did something improper, there is no need, subduing the heat of the competition, to cause a scene, to make an inappropriate explanation, or worse, to argue with the judges. The commander and the political instructor have the right to explain misunderstandings. They do that legally at the secretariat. Justice always prevails.

This, then, is all the general advice I care to pass on.

In the Leningrad Area

Moscow VOYENNYYE ZNANIYA in Russian No 7, Jul 80 signed to press 9 Jun 80 pp 20-21

[Article by V. Yevdokimtsev, chief of the CD courses, Nevskiy Rayon, Leningrad: "Wheeled Training Post"]

[Text] Driver V. Zaluchnyy confidently drove the bus in the packed flow of traffic through Leningrad's streets and finally reached the suburban highway. The route of the autoclub--the mobile training post belonging to the Nevskiy Rayon's CD courses--led to Dal'nyaya polyana Sovkhoz. This is the Kirovskiy rural area of Leningradskaya Oblast. It falls within the purview of our courses and we drive out to the installations there regularly.

At the sovkhoz they are preparing for an integrated exercise. This is the third time this month that V. Andreyev, a master of production training, is going there. The event today is staff practical training, so K. Batagov is coming along to help Andreyev by conducting lessons with the livestock protection team at the same time. Also expected at the sovkhoz is L. Berenev, chief of the rayon CD staff, who will supervise the practical training.

A group of local supervisors meets the vehicle at the sovkhoz club. All is prepared for the session in the foyer and the auditorium: diagrams, posters, and charts have been hung up. Textbooks, projector, films, and equipment were brought from the courses.

While the staff practical training was underway, K. Batagov worked with formation personnel. Along with posters and slides, at the end of the lesson he showed the training film "Deystviya naseleniya na zarazhenniy territorii" [Actions of the Population In Contaminated Territory] to sovkhoz workers. Participants in the forthcoming integrated exercise were satisfied with this lesson and stated they were prepared to operate more confidently since the content and sequence of the work were presented clearly.

"Podgotovka kompleksnogo ob"yektovogo ucheniya" [Preparations for an Integrated Installation Exercise] was shown for the command-supervisory staff following the staff practical training. This film seemed to combine all the presentations on the CD measures that had to be accomplished.

Thus, the work day of the masters of production training on this trip was precise and purposeful.

They returned to the city by evening, satisfied with the job accomplished. The driver-projector operator prepared the vehicle for the next trip.

The mobile training post is our fine wheeled assistant. The bus is fitted out with everything required for high-quality lessons. This includes a movie projector mounted in the cab, allowing us to show films anywhere the bus goes. During one month, for example, it went to Dal'nyaya polyana Sovkhoz three times, to the 8-th GRES, to the Dubrovka Reinforced-Concrete Components Plant, and served other installations in Nevskiy Rayon: the mirror factory, Barrikad Association, and Secondary School No. 350, where they gave a demonstration lesson on one topic to the fifth-grade class. Also, we use our wheeled training post for the purposes of propaganda, participating in integrated exercises at installations and in rayon medical aid team and reconnaissance group competitions. We set up a mobile radio system for broadcasting the latest news, passing information about competition progress, we transmit CD notification signals, and we distribute visual propaganda.

The training post now is equipped with a movie camera, giving us the capability to film exercises and competitions. Individual frames are converted to slides for showing during training.

During the summer months our bus is a welcome guest at pioneer camps, especially on days when the Zarnitsa [Summer Lightning] military sports game is underway.

Radiation and Chemical Reconnaissance

Moscow VOYENNYYE ZNANIYA in Russian No 7, Jul 80 signed to press 9 Jun 80 pp 22-23

[Article by M. Maksimov and B. Rykunov: "Along the Route and in a Center of Destruction"]

[Text] Radiation and chemical reconnaissance is one vital type of CD support measures. It is conducted in order to obtain data on the radioactive and chemical contamination on an installation's territory, in areas where CD formations deploy (rest), and on their movement routes to centers of destruction. The CD staffs at national economic installations organize it and radiation and chemical reconnaissance groups and elements* conduct it.

The latter have individual protective equipment for the skin and respiratory organs; radiation and chemical reconnaissance instruments (DP-5 or an equivalent instrument with a training unit, VPKhR [military chemical reconnaissance instrument]); marker sets (KZO-1 or KZO-2) or on-hand signs (markers); troop and individual dosimeters (ID-1, ID-11) or DKP-50A dosimeters; weather kit No. 3, and other equipment, plus vehicles and communications.

Groups and elements accomplish the most difficult special missions in centers of nuclear and chemical destruction or contaminated zones while conducting SNAVR

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*Abbreviated in future as group (element).

[rescue and emergency restoration work] and monitoring the contamination of people, equipment, supplies, food, water, and forage.

For a specialized tactical lesson (see illustration on inside back cover [not reproduced]), the supervisor beforehand selects a route at least 7-10 kilometers long and a section of territory on the installation itself. He then prepares for the lessons, sets up the tactical situation on a plan (map, sketch) of the installation, and establishes the sequence of actions for group personnel according to signals and inputs. The lesson plan reflects: the lesson theme, goal, training problems, time, and methodology for working out the problems; logistics; handbooks and textbooks used for preparation. Texts of the radio messages (inputs) and radio data (call signs, operating and reserve frequencies) also are worked out. The persons simulating those contaminated are briefed.

Having checked that the trainees are prepared for the lesson and having explained to them the goal and sequence of working out the training problems, the supervisor assigns the mission to move out to the jump-off point (area). Actions during the march are refined based on inputs studied during previous lessons or based on new inputs and signals. In the lesson area, the group commander issues instructions to place the vehicle in the fallout shelter and to camouflage it. A slit trench is dug to shelter the personnel and radiation and chemical observation is set up.

The supervisor playing the role of senior chief provides the following when assigning the radiation and chemical reconnaissance mission: data on the situation; the group's mission, reconnaissance route and to what line (point) or level of radiation to conduct it; what to establish and what to place special attention on, how to mark the limits of the contaminated sector; where neighboring groups are operating and what their missions are; procedure for reporting reconnaissance results, notification signals and actions to take if received; procedure for maintaining communications with the senior chief (commander); the jump-off point, the time to start and end the reconnaissance; the assembly point; and the deputies.

Then the supervisor checks to see how the mission was assimilated and he monitors the actions of the commander and of the group as they prepare for the reconnaissance. The group commander studies the reconnaissance route, determines the sequence of actions, after which, with the supervisor's permission, he issues the commands: "Put on protective clothing," "Take your places," "Start up," "March," and takes the vehicle to the jump-off point (Figure 1) [not reproduced]. Here, he orients the troops on the terrain and assigns them the mission to reconnoiter the route.

Having checked to see that everyone had assimiliated the mission well, the group commander guides the vehicle to the route and begins the reconnaissance. The lesson supervisor, located with him, monitors to see if the dosimeter monitor turns the DP-5 on in time and if the chemical monitor is in constant readiness to operate the VPKhR. All reconnoiter the terrain and report instrument readings. Then an input is made on the radioactive contamination and the radiation level. The group (element) commander, having received a report from the dosimeter monitor, instructs the driver to stop the vehicle and prepare it for surmounting the contaminated sector. Upon the command "Gas," personnel bring protective equipment to the protection position.

The supervisor monitors the actions of the dosimeter monitor and his reports on changes in radiation levels. When the 0.5 roentgens per hour [r/hr] level is reached, the group commander stops the vehicle and orders the chemical monitor to emplace a marker delineating the forward edge of the contaminated zone. Here, special attention is paid to the care with which the data (radiation level and time of radiation) are recorded, as well as to the correctness of where the marker is emplaced. Further, the dosimeter monitor refines the radiation level on the terrain and the radiation attenuation factor (Kosl) on the vehicle body. Simultaneously, the group commander logs the location, radiation level, and time of measurement on a map of the route and radios these data to the installation CD staff.

Monitoring the work of the scouts, the supervisor explains to them that markers are emplaced on the right side of the shoulder of the road in a clearly-visible place. The marker's face must be turned towards the uncontaminated side or towards the lower level of radiation. The radiation attenuation factor on the vehicle body usually is taken to be 2. However, this must be checked as the reconnaissance proceeds.

Movement along the assigned route continues at maximum speed. The dosimeter monitor measures the radiation level en route and during brief stops. The group commander radios the values and characteristic reference points on the terrain to the installation CD staff.

Having detected a high radiation level, the group commander radios this information to the chief of the CD staff after emplacing the applicable marker. Then he makes the decision to locate bypasses with lower radiation levels. The latter are designated by the established signs or arrows and the rear limit of the zone (radiation level 0.5 r/hr) by a marker.

The group proceeds to an uncontaminated area or to an assembly point, where personnel undergo partial special processing. Simultaneously, the dosimeter readings are taken, logged in the radiation monitoring log, and the senior chief is notified that the mission is accomplished.

In accordance with the tactical special lesson plan, the supervisor assigns the mission to reconnoiter a route contaminated by OV [toxic chemical agents]. The contamination, by order of the supervisor, is simulated by smoke pots or grenades, burning fuel, and other means. Providing a reminder about the properties of modern, highly-toxic nerve and paralytic chemical agents such as VX, Soman, and Sarin, the supervisor begins to work out the actions along the route (see Figure 1) [not reproduced]. He turns the trainees' attention to the properties of the indicator tubes, the contents of which change color not only due to toxic chemical agents, for which they are intended, but also due to several other substances present in the air. Thus, neutral and toxic smoke in large concentrations colors the packing in the tubes. Therefore, it is mandatory that a fitting with a filter be used when operating in a cloud of smoke. The VPKhR cassettes with indicator tubes are positioned so that the tubes with the red ring and red spot are on the top, then the tubes with the green rings, then those with the yellow ring. The air is checked in exactly the same way: does it contain toxic chemical agents? The trainees' attention is directed to determine nerve and paralytic toxic agents in dangerous and unsafe concentrations.

The group commander gives the command "Prepare instruments for operation," "Take your places," "Gas." With the lesson supervisor's approval, he initiates the chemical reconnaissance.

The group commander monitors the actions of the chemical monitor, who works periodically with the VPKhR and reports his results in monitoring the contamination of the air. During brief stops, the scouts train in accomplishing drills in examining terrain to detect toxic chemical agents or bacteriological substances. This is accomplished especially when there are craters, as well as from external features.

Upon arrival at the sector of the route where the OV contamination is simulated, the chemical monitor begins to analyze the air for presence of phosphorus organic toxic agents [FOV]. An input is received: "The packing in the indicator tube with one red ring and dot changed color from a light yellow to a red." The chemical monitor reports that FOV have been detected and takes a soil sample. The radiation monitor designates the forward edge of the chemically-contaminated zone with a marker containing a notation of the type of OV and time of detection. The direction of movement of the contaminated air is determined using weather kit No. 3 or smoke pots.

Further, making inputs, the lesson supervisor works out the procedures for monitoring the presence of OV in the air or on the terrain under conditions whereby the installation is encompassed by smoke, as well as determining the rear boundary of the contaminated zone. Also, bypasses around the contaminated sector are noted and actions in the event of the appearance of enemy aircraft are worked out.

Having determined the rear boundary of the contaminated zone, the group commander reports this to the installation CD staff, takes the personnel to an uncontaminated area, and organizes partial decontamination of the vehicle, instruments, and protective equipment (used oil can be employed to simulate the contamination). Following this, chemical monitoring of the personnel and equipment is taken care of and the decision is made for further use of the protective equipment. Personnel are sent to the special processing point (PUSO) and the people prepare to accomplish a new mission. The group commander reports reconnaissance results to the senior chief and presents a report in the form of a diagram on the radiation and chemical reconnaissance of the route.

Group actions to reconnoiter a center of combined destruction can be worked out during the next lesson. Mainly the tactics of personnel actions and the technical drills of reconnaissance in a center of combined destruction are studied. As a rule, they are conducted in the training village, with the required simulation.

At the jump-off point, the supervisor assigns the group commander the mission to reconnoiter the center. Here, specific sections (sectors) are assigned to each element. The main feature of actions in a combined center is that the reconnaissance is done under the shortest suspenses, as a rule, by detouring around the contaminated area via routes previously noted and plotted on the installation plan. Primarily, contamination of the air and terrain, the radiation level in the areas of shelter and where people are located, and the levels on the roads leading to the center are determined. After determination of places where people, water sources, and finished product warehouses are located, a reconnaissance of the entire center is conducted. A reduction in the level of terrain and air contamination is monitored until a level is reached, which allows individual protective equipment to be removed and people taken out of protective structures or shops. Scouts operate in vehicles or on foot, if vehicles cannot be used.

Having studied the situation, the group commander assigns personnel the mission approximately in this sequence:

"At 0530 on 10 June, the enemy made a nuclear strike and employed toxic chemical agents. As a result, there is a combined center of destruction on the plant's territory, there are fires and damage, and there are zones of radioactive and sectors of chemical contamination. According to data from the radiation and chemical observation post, at 0550 radioactive contamination at a radiation level of 5 r/hr was detected; this level continues to rise. Our group has been tasked to determine the area of OV contamination on the plant's territory and refine the radiation level, as well as find approaches (entrances) to where rescue operations will occur.

"The first element is to reconnoiter along Zavodskaya Street, in the plant headquarters, dining room, the Shop No. 4 protective structure, and the east gate to determine the contamination of the terrain and air there, OV type, level of radiation and degree of radioactive and chemical contamination in the dining room, and to bring in product samples for analysis (the other elements are tasked in a similar manner. See Figure 2) [not reproduced].

"Everywhere designate the boundary of the center of combined destruction with markers notating the time of detection, radiation levels, and OV type, especially in the area of the shops and protective structures. Further, determine the start and end of the reconnaissance, assembly point, to whom to report results, location of the commander, and who the deputy is."

Element commanders in turn refine the sectors and targets for reconnaissance and assign missions to subordinates. After that, the group commander gives the commands "Put on protective clothing," "Gas," and "Take your places."

An input is received as the elements depart for the main axes: "In the FOV indicator tube there is a steady red color and there are light, oily drops on the terrain." The chemical monitor uses his instrument to determine that the terrain and air are contaminated by a VX-type toxic chemical agent. He gives the "Chemical Alert" signal. The dosimeter monitor looks at the first sub-band and sees that the instrument indicator is at the beginning of the first quarter of the scale. He takes the reading and reports the radiation level.

Reacting to the lesson supervisor's inputs, the scouts at the sources of water and the warehouses where food, forage, and other materials are stored determine the nature of the contamination and take samples. Special attention is paid to finding out the concentrations of OV in the areas where they stagnate (in cellars, underground structures, cul-de-sacs, ravines, thick bushes, and so on), as well as to places with high radiation levels.

Upon accomplishment of the mission and designation of the boundaries of the center of destruction, group personnel go to an uncontaminated area for partial special processing, then gather at the assembly area. Here, element commanders report the final results of the reconnaissance and present diagrams with plotted boundaries, radiation levels, and data on the OV type. On the basis of these data, the group commander works up a report in diagram format and reports to the senior chief. Meanwhile, the scouts go to the PUSO for complete special processing.

In conclusion, the special features of conducting reconnaissance at night are pointed out.

CAPTIONS

Inside back cover	Figure 1. Route Reconnaissance (variation).
	Figure 2. Reconnaissance of a Center of Combined Destruction on a National Economic Installation.

Local Radio Broadcast Material

Moscow VOYENNYYE ZNANIYA in Russian No 7, Jul 80 signed to press 9 Jun 80 p 24

[Unattributed: "The Stopwatch is Running"]

> [Text] We continue publishing materials from the radio editorial board at the Dinamo Plant in Moscow. This time we present a correspondent's report discussing practical training to fulfill CD norms in the experimental production shop.

The racket from the machine tools dies down gradually. Time for shift change. But, not everyone rushes to the corridor. A group of workers has formed near the tool room. Each has a gas mask. This is the CD rescue group.

"Everything is not up to snuff," reports commander Viktor Ivanovich Anisimov, explaining the goal of the meeting, "as far as fulfillment of the first and second norms is concerned. That is why we decided to train after work."

A command was heard: "Ready gas masks!"

Everyone in unison pushed the bags forward and, having opened the flaps, fastened them with the belt-type strap. This signified that the gas mask had been placed in the "ready" position.

I query the commander: "Do the troops have different gas masks?"

Anisimov: "Yes, I and several of the comrades have GP-5 gas masks. The rest are equipped with GP-4u gas masks. Both types reliably protect the respiratory organs, eyes, and face against radioactive and toxic chemical agents, as well as against bacteriological agents."

"Always," I asked?

Anisimov: "Of course, always, if the gas mask is the correct size and is used correctly."

The commander inspects the formation, checking the condition of the gas masks and that it is correctly assembled. He then asks trooper Klimov when the gas mask is transferred to "combat" position.

Klimov: "On the signal, 'Radiation danger' and 'Chemical alert,' as well as the command 'Gas' or independently upon detection of radioactive, chemical, or bacteriological contamination."

Anisimov: "You know the theory. Now, let's see what practice shows us."

The stopwatch is running. The troops rapidly remove the helmet facepieces from the bags and put them on their heads. Almost all do so within the norm. But, the commander's sharp eyes don't miss the error the trainees made. One forgot to close his eyes when putting the facepiece on. Another, having put it on, did not exhale sharply. The facepiece on a third was crooked. The command "Remove gas masks" resounded.

Anisimov: "You see how many shortcomings there were. And, each such mistake is fraught with serious consequences. So, in the event of disaster, rely on yourselves, not on the gas mask. It is your reliable friend. Learn to use it properly. Let's do it again. Gas!"

Practice makes perfect, they say. And, after numerous repetitions, the troops more confidently and precisely carry out the drills of donning and removing the gas mask. There were less errors made while fulfilling this important norm.

A break was announced. The troops dispersed for a short rest. One, seated, leaned on his gas mask bag.

Anisimov: "Comrade Petrov! You forget that a gas mask requires respectful care. It cannot be tossed aside or kept in a damp or exceptionally warm place. Moreover, it should never be used to lean on or in place of a pillow...."

A reasonable criticism, and the student immediately corrected his mistake. Again came the command "Fall In!" The group quickly forms up to work out norm number two--putting a gas mask on an injured person. The practical training continues.

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In the City of Tbilisi

Moscow VOYENNYYE ZNANIYA in Russian No 7, Jul 80 signed to press 9 Jun 80 pp 24-25

[Article by A. Kantor, Tbilisi: "For Him Peace is Contraindicated"]

[Excerpt] Years and years passed. It was not time for Lt Col (Res) [Vsevolod Leonidovich] Bogoslovskiy, a front-line soldier, to take it easy. But, as they say, for him peace is contraindicated. He took up quiet work and headed the CD staff at the Institute of Vehicle Mechanics at the Georgian SSR Academy of Sciences.

Not everything went smoothly at first. Not everything desired turned out well. But, the collective was good and they greeted him graciously. However, relations with certain scientific workers for some reason did not work out for awhile.

In all his initiatives, Bogoslovskiy sought support from communists and Komsomol members. At the party bureau's initiative, a meeting of the party aktiv was held and all CD supervisory and command-supervisory personnel were invited. It is important that institute director R. Dvali gave a report on the state of and missions of CD. He revealed shortcomings and the reasons for them and pointed out ways to correct them. He focussed the attendees' attention on solving vital problems and pointed out perspectives. This impelled everyone more seriously to go about accomplishing CD responsibilities.

The director was convinced that he had a serious, bright, skilled assistant in the person of his chief of staff. Thus, excellent mutual relations were established between them.

Because of my duties, I had numerous occasions to meet Bogoslovskiy. You don't always meet him in his office. You have to look for him in the departments, the laboratories. The chief of staff assists in preparing lessons and practical training. He personally conducts many practical lessons, especially with the supervisory and command-supervisory personnel. He carefully studies the businesslike qualities of formation commanders, he knows the people and their capabilities and shortcomings.

R. Chodrishvili, institute party bureau secretary, stated that, besides his basic work, Bogoslovskiy supervises the school of economic knowledge in the party-political education network. In addition, he is a party group organizer. He mobilized the aktiv and found the skilled personnel required to create good training facilities. They built many different mock-ups, displays, and diagrams with their own hands. They created CD corners and full-scale sectors. Demonstration lessons, refresher training, and exercises are held at the institute level.

The CD staff closely coordinates with the DOSAAF committee on questions of military-patriotic work and organization of CD propaganda, enlisting in so doing war and labor veterans and using local radio. As a rule, the CD staff's callsigns resound from the intercom during the lunch break. The radio station talks about defense against mass destruction weapons, activities in response to CD signals, and self-help and mutual assistance. Speeches by lecturers from the Znaniye Society, war and labor veterans, and activists in mass-scale defense work are organized systematically.

Results of socialist pledge accomplishment, also including CD items, are summarized at the institute quarterly. The best departments, laboratories, formations, and workers are awarded certificates and cash prizes. Photographs of the progressive workers are posted on the Board of Honor.

A great deal more can be said about the chief of staff--about Bogoslovskiy, active organizer of mass-scale defense work. He is not satisfied with what has been accomplished and self-critically evaluates his own work. That is the veteran's nature.

In Irkutskaya Oblast

Moscow VOYENNYYE ZNANIYA in Russian No 7, Jul 80 signed to press 9 Jun 80 pp 24-25

[Article by I. Antoshkin: "Every Thursday"]

[Text] Based on a joint decision of the CD chief, bulk plant director, party bureau, and local trade union committee, every Thursday is the day for CD lessons at the Ust'-Kut Bulk Plant (Irkutskaya Oblast). On that day, lessons in training groups from the 20-hour program are conducted with personnel of the civilian formations and with all workers and employees. Lectures are presented and movies on CD subjects are shown in the shops and departments. Training posts and displays for conducting practical lessons are arranged. Other measures are taken to improve CD at the installation.

The scheduled day approach allows the CD chief, his staff, and the party bureau to maintain strict control over accomplishment of intended plans in all the bulk plant's subunits.

The bulk plant collective took first place in all CD categories in the socialist competition among Ust'-Kut's national economic installations for the 1978-79 training year.

The following shops and CD formations at the bulk plant won prizes: the laboratory (M. Pshenichnikova, chief and lesson supervisor), technical emergency team (A. Bronzov, commander), medical aid team (T. Plugar', commander), communications and notification element, and the reconnaissance and fire-fighting elements. By order of the CD chief, appreciation was expressed to all winners.

Lessons this year are underway in just as organized a fashion. A planning seminar was conducted with the training group supervisors and civilian formation commanders. Speakers included bulk plant director A. Kraynikov, party bureau secretary V. Pikhtin, and chief of the CD staff I. Koshkin. In addition, lectures are presented, discussions are held, and films on CD topics are shown in the shops.

The CD aktiv is more broadly based as each year goes by. Not only do CD workers and lesson supervisors now appear before the workers and employees. This group now includes medical aid team members like L. Belans, L. Shishkina, L. Kazakova, L. Plekhanova, and others. Also, medical aid team member L. Petrenko conducts lessons on individual protective equipment in the machine shop.

Follow-Up Report on Training Criticism

Moscow VOYENNYYE ZNANIYA in Russian No 7, Jul 80 signed to press 9 Jun 80 p 25

[Unattributed: "Too Many Cooks"]

[Text] The subject of an article with the above title printed in issue No. 3 for 1980 was shortcomings in how CD training is organized for the non-working population in one of the regions in the city of Ivanovo.

As A. Mokryakov, chairman of the ispolkom of the Ivanovskaya Oblast Soviet of Peoples' Deputies, reported to the editorial board, the criticsm was justified. A 2-week training methods seminar was conducted with lesson supervisors at the Ivanovo Order of Lenin Blending Combine for the purpose of eliminating shortcomings. They have been provided the requisite training textbooks. Three classrooms have been set up. The oblast CD staff is monitoring how lessons are conducted and is providing methodological aid to supervisors.

Since, comrade Mokryakov notes, based upon inspections analogous shortcomings exist also in other areas, the rayispolkoms of Ivanovo held meetings with housing managers, ZhKO [communal housing department] chiefs, and the chiefs of installation CD staffs. These individuals have been specifically tasked to improve the training of the non-working population.

In addition, the ispolkom of the oblast Soviet of Peoples' Deputies obliged the ispolkoms of the city and rayon Soviets of Peoples' Deputies in the oblast to take the necessary measures to eliminate shortcomings in training the population not occupied in the production and service spheres on how to defend against mass destruction weapons.

Power Tools for Rescue Work

Moscow VOYENNYYE ZNANIYA in Russian No 7, Jul 80 signed to press 9 Jun 80 pp 26-27

[Article by Col V. Komarnitskiy: "Small-Scale Mechanization"]

[Text] Destruction on a massive scale of buildings, structures, and communications is characteristic of contemporary nuclear missile warfare. And, even in peacetime, in the event of production accidents and natural disasters, people might find themselves in destroyed and blocked shops, cellars, or shafts. Therefore, timely rendering of assistance to the injured is the main mission of CD formations that do rescue and emergency restoration work (SNAVR).

Experience in cleaning up after production accidents at several industrial enterprises demonstrated that, along with heavy, highly-productive equipment, formations also need small-scale mechanized gear--various mechanisms, devices, and tools simple in design and operation. They significantly increase the efficiency of mechanizing operations to clear rubble, to make passages and corridors through it, and when localizing accidents in public power networks. Their use speeds up the rates of conducting reconnaissance, insures rapid search and rescue of the injured, and high SNAVR rates.

At present, equipment with autonomous drive (motor, mechanical, hydraulic), which supports SNAVR to the entire depth of a center of destruction, has been created and is in wide use in the national economy. Based on the type of operation, they are designed to break up concrete (reinforced concrete), brick, and stone works, and to break up frozen soils and hard rocks; to cut and weld metal and metal components; to raise and remove components; to conduct emergency restoration operations in public power networks, and so on.

Among the pneumatic equipment, pneumatic drills, IP-4604 pneumatic concrete breakers, and PR-30 perforators (jack hammers) are used widely. Electrical equipment like IE-4211 and IE-4212 electric hammers and IE-4209 electric crowbars also are useful for the same purposes. The fixed power supply or 30kw mobile electric power stations can be used as their power source.

The S-406M motor-driven concrete breaker and the Smena motor-driven perforator, which can bore to a depth of 4 meters in hard soil, are among the motor-driven equipment used. It drills into concrete at a speed of up to 2mm/min and is driven by a 4-hp internal combustion engine.

An example of an explosive device for breaking up concrete is the rock breaker (photo 1) [not reproduced]. The weight of the charge (Sokol or Berkut smokeless powder) is 8 grams packed in a 12-gauge shotgun shell.

Another mass-scale type of emergency restoration operation is cutting metal components, reinforcement, and metal items. Useful here are P-21 and P-22 pneumatic hand polishing machines, which cut reinforcement, pipe, and other metal items at a rate of 110-120 cuts/min for 20-mm diameter reinforcement and 45-50 cuts/min for 60-mm diameter steel pipe and walls 3.5mm thick. VSBA-1400 and Sh1-178 electric corner polishers with 1900 watts intake power and 220 volts also are effective. Photo 2 [not reproduced] depicts a Sh1-178 in operation cutting reinforcement as a pile of reinforced concrete slabs is cleared.

Gas-operated and arc-welding gear is the most productive for cutting metal, but its use is restricted. Thus, it requires acetelyne, oxygen, a generator, hoses, cable--all difficult to supply to workers in the event of necessity. Therefore, it is advisible to use equipment with motor drive like the UKM-4 (driven by the internal combustion engine from a Druzhba power saw); abrasive reinforced disk (Photo 3) [not reproduced], which makes it possible to cut metal to depths of 75mm; NS-1-00 combat engineer mechanical cutters with elongated handle to cut wire and reinforcement with a cross-section of up to 1 cm; portable gas-operated metal cutter kits, and other devices.

Among the small-scale mechanized equipment used to raise and remove destroyed structural components, of great interest are various jacks: DGO hydraulic jacks with a lift capacity of 50 tons and lifting height of 10 cm; DR rack and pinion jack with a lift capacity of 8 tons and lifting height of 40 cm, DGS special hydraulic jack with a lift capacity of 8-12 tons and a lifting height of 15 cm. In every case, the height insures clearance to pass through cables with clamps for subsequent collapsing and moving the component using heavy equipment and a winch.

Among such winches are hand winches with a tractive force of 1.5 and 3.0 ton-force (Photo 4 [not reproduced] shows an LR-1.5 ton-force hand winch in operation); STD-999/1 hand and STD-999/5 electric winches with a tractive force of 500 kgs-force and 30 meters of cable to lift and move people and loads when doing SNAVR at a height. Sets of small block and tackle with a lift capacity from 500 to 5000 kgs-force and several hoisting devices also successfully are being used.

In a center of destruction, smoke fills cellars converted into protective structures. Accidents can occur in water supply and sewer systems, leading to flooding. In this event, the corresponding equipment must be envisaged. The smoke pump from the UKM-4 set (driven by the Druzhba power saw engine) can be used to pump smoke out of buildings, while GNOM-10-10, -25-20, and -40-18 electric pumps can be used to pump water from protective structures, wells, ditches, and trenches at mines and from cellars.

Pneumatic and hydraulic hammers used as removable excavator operating equipment already are used extensively in the national economy. They are used to break up concrete (reinforced concrete), stone, and brick structures, frozen soil, and hard rock. This is a very effective way to break up rubble, to punch holes and passages (manholes) in the walls of protective structures, and to break down piles threatening to collapse. It goes without saying that the safety of workers operating at heights must be insured. They must be equipped with the PVU-2 climber's safety belt, which will hold up to 100 kg at a height of 10 meters, flexible metal and tape ladders, belts for working on open lines, straps for raising and lowering people, fireman's safety belts, and the like.

In Altayskiy Kray

Moscow VOYENNYYE ZNANIYA in Russian No 7, Jul 80 signed to press 9 Jun 80 p 27

[Article by V. Yukhimenko: "And There are Fewer Fires"]

[Text] Each year there is more power equipment in agricultural production and there are larger amounts of fuel and flammable materials. All this dictates a requirement to strengthen fire protection for agricultural installations and population centers.

The technical equipment provided civilian fire fighting formations and their training in battling fires play a large role in this protection. Moreover, the significant distance of rural population centers, kolkhozes, and sovkhozes from each other and from the location of rayon fire fighting subunits sometimes results in firemen arriving on the scene late.

Considering this circumstance, the Altayskiy Kray CD fire fighting service, the kray Sel'khoztekhnika Association, and the agricultural directorate put forth an initiative to organize the modification of cargo trucks as fire trucks of simplified design. The ispolkom of the Altayskiy Kray Soviet of Peoples' Deputies approved this suggestion and tasked the kray Sel'khoztekhnika Association to implement it, as well as to organize the repair of fire truck chassis and of special equipment.

Now such fire trucks are found almost at every farm in the kray. This noticeably increased the readiness of kolkhoz and sovkhoz civilian fire fighting formations, cut the number of large fires, and reduced material losses due to fire. Now, fire fighting formations extinguish a majority of rural fires prior to arrival of rayon-level assets.

A 2000-liter fire truck on the GAZ-53A chassis is being manufactured. Fire fighting implements are stowed in boxes attached to the tank. Containers for intake hoses and brackets for attachment of a ladder are mounted on the upper portion of the tank. An attached gear-type pump (NShN-600) is mounted on the front bumper.

The equipment kit includes: 120 meters of 51-mm diameter fire hose and of 66-mm hose; two 4-meter intake hoses 75-mm in diameter and an intake strainer; RT-70 three-way splitter; "SA"-2, "RS-B"-1, and "KR-B"-2 branches; simplified fire fighting crowbars, and carpenter's axe.

The truck provides water to the fire from a reservoir or from its own tank. The water reserve in the tank lasts 10 minutes when one "KR-B" branch operates continually or for 5 minutes when two are working. The water lasts 2.5 minutes when two "KR-B" and one "SA" are in operation. Personnel in the civilian formations develop the corresponding skills, just like the ability to handle a rapidly-changing situation at a fire, during practical training sessions. It should also be taken into consideration that the fire truck combat crew only includes the driver and one fireman, while vehicle capabilities allow simultaneous employment of three branches to extinguish a fire. Thus, volunteer fire fighting teams or residents at the scene can be enlisted to assist the crew.

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VETERANS' BENEFITS: IN THE UNION REPUBLICS

Moscow VOYENNYYE ZNANIYA in Russian No 7, Jul 80 signed to press 9 Jun 80, pp 38-39

[Article: "Benefits for the Frontliners"]

> [Text] Veterans enjoy universal respect and attention in our country. The CPSU Central Committee and USSR Council of Ministers decree "On Additional Measures to Improve the Material and Personal Conditions of Participants of the Great Patriotic War", adopted at the beginning of the present year, is a new manifestation of concern for them.
>
> Benefits and advantages for veterans have also been introduced through union republic legislation. Some of these benefits, which are established with a consideration for local conditions and possibilities, are described below.

Naturally, special attention is devoted to maintaining the health of veterans. This is reflected in measures aimed at providing medical services. All war participants may undergo a medical examination once a year (at their place of residence or at work). In the future, persons who are found to be ill will be subjected to dispensary observation, they will be given priority service in therapeutic-preventive institutions and in pharmacies, and they will enjoy priority hospitalization. The USSR Ministry of Public Health has ordered subordinated organs to assign non-working veterans who had retired prior to 1 January 1979 to the polyclinics to which they had been assigned in their last job, irrespective of the length of their retirement and the departmental subordination of the polyclinics. A number of republics (RFSFR, Ukrainian SSR, Belorussian SSR, Georgian SSR, Moldavian SSR) have been permitted to place veterans in hospitals for Great Patriotic War invalids, room permitting.

Special wards have been set up for veterans in the hospitals and clinics of the Ukrainian and Azerbaijan SSR. In order to provide better medical services to veterans, allocating a physician, a nurse and, when necessary, special offices to each polyclinic (medical unit) has been proposed in the Uzbek SSR.

Priority stomatological care of all forms, including dental and maxillary-facial prosthetics, and priority provision of prosthetic and orthopedic articles has been foreseen in the Uzbek, Latvian, and some other union republics.

It has been decided in the Belorussian SSR to issue 1,000 passes to sanitariums, vacation hotels, and vacation homes each year to retired veterans. The Tajik SSR has foreseen priority admission of needy retired veterans to boarding houses and vacation homes, while the Ukrainian and Estonian SSR will be taking in such veterans in boarding houses.

The additional housing benefits are significant. Veterans have been given the preferential right to acquire housing space and improve their housing conditions. This benefit is exercised in accordance with the statutes on the order of accounting and distributing housing space in the republics, krays, oblasts and cities.

Most union republics have given war veterans the right to priority admission to housing construction cooperatives, while in addition the Azerbaijan SSR will now afford the preferential right of admission to summer home construction cooperatives and of summer home rental.

The communal and personal service organs of all union republics are obligated to provide all possible assistance to veterans in the repair of apartments (rooms, homes) and in the construction of individual houses. The right of preferential repair of apartments (homes) has been established for veterans in the RFSFR and in the Kazakh, Tajik, Georgian, Moldavian, and Lithuanian union republics; moreover the RFSFR and the Georgian SSR have established the right to acquire garden sheds or materials for their construction, and the Kazakh SSR has established the right to acquire lots for construction of individual houses. The Moldavian and Azerbaijan SSR have established the right of priority acquisition of construction materials for the repair and construction of housing, work buildings, and so on.

Transportation benefits are expanding significantly. Most republics have given war veterans the preferential right to acquire passenger cars, to contract for their repair and technical maintenance, and to join cooperatives for the construction and operation of collective garages and parking lots. War veterans have also been given the preferential right of purchase and technical maintenance of other transportation resources--motorcycles, motorized carts, and motorboats--in the RFSFR and in the Tajik and Kazakh SSR.

War veterans residing in Georgia and Armenia may use all forms of urban passenger transportation (except taxis) free of charge; they may also use public transportation (excluding taxis) in rural areas within the limits of the administrative region in which they live.

War veterans in Belorussia, Georgia, Armenia, Azerbaijan, Tajikistan, Uzbekistan, and Latvia have been given the right of priority acquisition of tickets from ticket counters in rail and bus terminals, airports, and river ports.

Priority sale of one-time discount tickets (with a 50-percent discount) to former frontliners for one trip once a year by rail here and, in regions lacking rail communication, by water, air, or intercity transportation has been established in the Ukrainian SSR. The right to priority use of taxis in the Estonian SSR has been foreseen for disabled war veterans.

Privileges have been established in regard to services provided by trading and by cultural and personal services enterprises. The RFSFR, Azerbaijan, Georgia, and Uzbekistan have established a preferential right for war veterans to acquire popular goods (furniture, carpets, refrigerators, color television sets, and so on). The Kirghiz SSR, Georgia, Armenia, Tajikistan and Moldavia have foreseen priority services to war veterans by food and industrial goods stores as well as by public food services enterprises. This right has been established for great patriotic war invalids in the Estonian SSR. The Azerbaijan SSR is organising acceptance, from former frontliners, of tentative orders for consumer goods, and for their delivery to their homes. Trade organs in the appropriate departments in the Uzbek SSR have been asked to provide all possible assistance to war veterans in the acquisition of food and industrial goods, and to insure acceptance of tentative orders.

A number of republics have expanded the lists of industrial goods to be sold to war veterans and invalids on credit. Thus retail trading enterprises selling goods to Great Patriotic War invalids on credit allow up to 24 months to pay (irrespective of the cost of the goods); for extending such credit, the trading organizations collect only 1 percent of the total credit extended, irrespective of the time of payment. Goods sold on credit are placed in the possession of war invalids without an initial down payment.

Customers (clients) purchasing goods on credit and ordering custom-tailored clothing on credit from tailoring enterprises and shops in Belorussia are now offered a 50 percent discount from the existing loan interest standards if they are Great Patriotic War invalids; the time of loan repayment may also be lengthened for them by a time and a half.

War invalids in Estonia are offered the right to purchase goods on credit without a down payment. In this case it is established that the loan payments may be extended over a period of 3 years; loan interest is set at 0.5 percent if the term of the loan is up to 1 year, and 1 percent if the term of the loan is from 1 to 3 years. War invalids in Tajikistan purchasing goods on credit are given 1-year installment loans for goods costing up to 150 rubles, and a year and a half for goods costing over 150 rubles. Goods sold to them on credit do not require a down payment when the cost of the purchases is up to 150 rubles, if the monthly payments do not exceed 20 percent of their wages or pensions. The interest they pay on their loans is kept at 0.5 percent of the total loan amount irrespective of the repayment time. Benefits offered to Great Patriotic War invalids in the sale of goods on credit (longer installment loan repayment time, exemption from down payment, reduced loan interest) are extended to all war veterans in the Latvian SSR.

In accordance with an order of the USSR Minister of Trade, trading enterprises everywhere are required to determine the list of food stores servicing war invalids and the order of accepting tentative orders from them for all forms of goods; to deliver these goods to the homes of the invalids (with a consideration for their health and the necessity of this service); to accept tentative orders for select products on holidays, and insure a possibility for acquiring popular industrial goods through tentative orders placed at stores servicing their place of residence; to organize and expand sale of conventional-steering passenger cars to invalids through specialized stores, with the consent of social welfare organs.

War veterans may purchase tickets at theaters, movie houses, and concert organizations on priority in the Belorussian SSR, Uzbek SSR, Tajik SSR, Georgian SSR, Azerbaijan SSR, Armenian SSR, Estonian SSR, and Moldavian SSR.

A number of republics have organized patronage over single, elderly, sick war veterans and group 1 and 2 disabled veterans by enterprises, organizations, kolkhozes, and sovkhozes. They are assisted in the repair of their quarters, acquisition of fuel, and maintenance of their homes and private plots.

Other benefits: The RSFSR and Belorussian SSR have established an exemption from the building tax for cooperative garages (parking lots) for motor vehicles belonging to group 1 and 2 Great Patriotic War invalids who had served in the armed forces and were disabled due to wounds, contusion, or disabilities in defense of the USSR and during execution of other responsibilities of military service, or due to illness associated with presence at the front; to group 1 and 2 invalids who had formerly served as partisans, and to group 1 or 2 invalids receiving pension support equivalent to that of the indicated categories of servicemen. In these republics and in the Kazakh SSR, Great Patriotic War invalids and invalids equivalent to them residing in cities or in workers', vacation, and health resort settlements, are exempted from transportation ownership fees for motor vehicles, motorcycles, and motorboats in their position. In addition war invalids in the Kazakh SSR are exempted from one-time fees at kolkhoz markets.

Veterans in many republics have the right to acquire fuel on priority. The Belorussian SSR and the Azerbaijan SSR have foreseen priority allocation, to war veterans, of feed for cattle in their personal possession, while the Azerbaijan SSR also foresees the right to acquire spare parts for motor vehicles, and of priority reception in institutions and organizations for examination of their proposals, claims, and complaints.

It has been established in Lithuania and Tajikistan that school-age children of veterans are accepted by dormitories in higher and secondary special educational institutions on priority.

The Georgian SSR, Estonian SSR, Latvian SSR, Moldavian SSR, Tajik SSR, and Kirghiz SSR foresee priority services to war veterans at intracity communication stations, post offices, and other communication institutions.

Documents confirming the right to the established benefits and privileges include war invalid certificates and certificates issued to participants of the Civil and Great Patriotic wars and other combat operations in the defense of the USSR, among military servicemen who had served in military units, staffs, and services within the composition of the standing army.

All questions associated with benefits and privileges offered to participants of the Great Patriotic War should be referred to the executive committees of the local soviets of peoples deputies of the military commissariats.

11004
CSO: 1801

SOVIET COMMENTS ON THE U.S. 'MX' MISSILE

Moscow VOYENNYYE ZNANIYA in Russian No 7, Jul 80 signed to press 9 Jun 80 pp 44-45

[Article by V. Savin and V. Utkin based on materials from the foreign press: "Why the Pentagon Needs the MX Missile"]

[Text] Having cast off the mask of pacifism and defense of human rights, the present U.S. administration is proceeding ever-further and more openly on the road of the country's militarization, and it is taking increasingly more aggressive steps on the road of return to the cold war. And one of the militarist yearnings of the USA is to change the balance of strategic forces in the world in its favor. It was precisely with this goal in mind that President J. Carter announced the beginning of work to create the MX missile system back on 8 June of last year with the approval of the U.S. Congress. In the past year the international press devoted many pages to this new form of missile weapons.

The acronym "MX" comes from "Missile X"--the "mysterious missile". However, judging from the foreign press the performance characteristics of this missile are not being concealed; on the contrary they are being broadly advertised throughout the whole world. The proposed locations of the missiles in the USA and the means of their installation are even known. Only the exact coordinates of the location of each MX missile at a particular time will be unknown--their positions will be covertly changed.

Judging from such reports the MX is a mobile ground-based intercontinental ballistic missile intended to replace the USA's existing missiles of the same class that are permanently based. Presently the USA's strategic nuclear forces consist of ground-based intercontinental ballistic missiles, the same sort of missiles carried by submarines, and missiles carried by strategic bombers. The least vulnerable of these forces are the submarine fleet and aviation, inasmuch as they may vary their positions. Ground-based intercontinental missiles, meanwhile, which make up about 25 percent of the total power of the USA's nuclear weapons, and which include 550 Minuteman III's, 450 Minuteman II's, and 54 Titans, are permanently located in silos and capable of being monitored by artificial earth satellites.

The foreign press notes that if these targets are subjected to a nuclear missile strike, not more than 10 percent of the missiles would be destroyed. In the future, however, if the enemy creates missiles with higher homing accuracy and a larger number of independently targetable warheads, the press notes that the probability of destroying stationary missiles may grow: After 1985, the missile guidance circular error (the radius of a circle within which the probability of a missile hit is 50 percent) will decrease from 370 to 180 meters, and consequently the probability of destruction will increase to 36 percent with one warhead and to 60 percent with two. This is what American "hawks" now cite as a justification of their decision to initiate creation of MX intercontinental ballistic missiles.

The international press also reports the expected comparative characteristics of the MX missiles (see table).

	MX	Minuteman III
Length, meters	22	18.2
Diameter, cm	230	167
Lift-off weight, ton	87	35.3
Payload, tons	3.6	1.13
Range, km	11,000	9,250
Number of independently targetable warheads	10	3
Power of one warhead, kilotons	350	170
Circular guidance error, meters	100	370
Type deployment	Mobile, in shelters	Stationary, in silos
Shelter (silo) strength, kg/cm^2	14	140

Thus the MX missile is significantly superior to Minuteman III in terms of the power of the nuclear charges, the number of warheads, and the accuracy of their guidance systems. It is clear that the MX program is pursuing the goal of not only insuring the invulnerability of the USA's strategic missile forces, but mainly annihilating the enemy's strategic missiles.

As is noted in the foreign press, MX missiles are to be made invulnerable in the following way. A loop route with 23 shelters, located along both sides of the route at an interval of 2 km and connected to it by approach ways, will be built for each missile. Periodically the missile will be moved covertly along this loop route from one shelter to another by a special transporter-launcher. The missile is to be launched both from the loop route itself and from the shelter, for which purpose the latter has a flip-top roof.

However, according to the latest press reports the possibility for raising the roofs of the shelters is doubted in view of the great technical complexity and expensiveness of such an operation (the roof is enormously heavy, and it consists of a 60 cm layer of concrete and a 1.5 meter layer of earth covering an area of about 60 × 10 meters). Tests have shown that the transporter-launcher tractors can pull a transporter-launcher together with an MX missile out of a shelter even in the event that the latter is collapsed by a nuclear strike.

Movement of an MX missile from one shelter to another will be kept covert with the help of a special covered vehicle enclosing the transporter-launcher and the MX missile; it will enter a shelter together with the latter, leave the transporter-launcher and MX missile in it, and then enter each of the remaining 22 shelters empty. It is believed that through such actions, the incidental observer would be misled as to the true position of the MX missile.

The foreign press reports that in peacetime, the transporter-launcher and MX missile will be moved to another shelter with a periodicity of several months only for the purposes of technical maintenance. The moves will be made more frequently in wartime. Another possibility is for the transporter-launcher to move constantly around the loop route together with this MX missile, and in response to a nuclear attack warning, to head for the nearest shelter while the enemy's attacking missile is flying toward the USA.

The shelter for the transporter-launcher and the MX missile is a strengthened concrete structure which is oriented horizontally, in contrast to the vertical silo of the Minuteman III missile. The shelter is designed to offer protection against a shock wave with an excess pressure of 14 kg/cm^2. This would not provide protection against a direct hit by a nuclear warhead, but the shelter is strong enough to withstand an explosion a certain distance away.

The transporter-launcher for the MX missile is moved by two powerful tractors (one in front and the other in back) imparting a speed of 50-55 km/hr in both directions. The total weight of the transporter-launcher is 318 tons; its overall dimensions are: length--55 meters, breadth--4 meters, and height --4 meters.

All shelters and transporter-launchers are outfitted with acoustic, electromagnetic, and heat-sensing systems to warn of intrusion by unauthorized personnel (espionage agents). Detection of an empty camouflaged vehicle by seismic reconnaissance apparatus may be eliminated by installation of mass simulators aboard. No one maintenance crew is aware of the locations of all MX missiles, since the loop routes followed by the transporter-launcher and the missile are not connected to each other.

U.S. Assistance Defense Secretary W. Perry announced the viability data of these missiles to the press. Their viability is achieved by the fact that the enemy would be forced to strike the shelters rather than the missiles, since he will not know which shelter hides the missile. American military experts believe that given the existing balance of forces, 4,600 shelters for 200 MX missiles would be sufficient, and that a nuclear strike against them would require all of the probable enemy's intercontinental missiles.

The designs of the "hawks" are simple: After such a strike, the USA will have a superiority in nuclear missile weapons.

The press also reports that the MX mobile missile system is to be deployed in two western states of the USA--Nevada and Utah, where desert regions suited to this purpose are available. Land required basically only by the shelters will be taken out of public use: One hectare per shelter. And the energy requirement of each shelter will be 5-10 kw, which will tentatively come from solar, geothermal, and wind power systems.

The MX missiles and transporter-launchers will be conveyed in disassembled form to the basing area by rail. An initial assembly point at which the missile stages, the transporter-launcher units, and other equipment will be put together is created in each such area. The missiles and transporter-launchers will be carried from these points by rail to final assembly points located near the loop routes. Here the final assembly of the transporter-launcher will occur and the missiles will be installed on the transporter-launchers; from here, the combat-ready transporter-launchers will travel on their own power to the loop route with its 23 shelters.

The press reports that the first launchings of the MX missiles are planned for 1983. The first generation of the MX system is to be combat ready by 1986, and the entire system of 200 missiles is to be ready by 1989.

The outlays on development, manufacture, and deployment of the entire MX system are estimated at $33 billion, and the operational expenses following deployment will be $440 million per year.

Responsibility for developing the MX missiles and their mobile basing systems has been assigned to the U.S. Air Force Ballistic Missile Administration (Norton Air Base, California). A group of 25 principal contractors has already been formed; it includes the leading companies and corporations of the USA. Among them are the (Tikol), Aerojet General, Hercules, and Rockwell International corporations. They are responsible for development and manufacture of, correspondingly, the first, second, third, and fourth stages of the missile. The Martin-Marietta, Northrop, and Honeywell corporations are developing the control and guidance systems; Boeing and Parsons Westinghouse have accepted contracts for the transporter-launcher and other components of the system. In addition to the principal contractors, a large number of subcontractors are participating in development and manufacture of the missiles.

After all of this, official Washington declarations that the plans for deploying the MX missiles do not contradict the Strategic Arms Limitation Treaty (SALT-TWO), signed by the U.S. President, sound so blasphemous. Moreover U.S. government representatives have often stated in the press that the MX missile is only a modernized version of Minuteman III and that therefore the total number of ballistic missiles would not be increased.

However, even in the USA many think differently. California Governor J. Brown feels, for example, that the plan for deploying the MX missiles will elicit a retaliatory reaction, and that in the end it will add nothing to the security of the American people. There is also strong opposition to the plan for creating the MX system in the U.S. Congress, and among government and public officials of Utah and Nevada, in which these missiles are to be based.

11004
CSO: 1801

CIVIL DEFENSE: COMMENTS ON NEW U.S. DOSIMETERS

Moscow VOYENNYYE ZNANIYA in Russian No 7, Jul 80 signed to press 9 Jun 80 pp 45

[Text] The foreign press reports development of a new miniature gamma-emission dosimeter that will produce acoustic signals in response to accumulation of a particular total exposure dose. The dosimeter weighs 50 gm, and its dimensions are 6.2 × 3.2 × 1.7 cm. It is powered by a long-life power cell. The dosimeter is sensitive within a broad range of gamma-emission energies and dose rates. A cadmium teluride (CdTe) crystal from 8 to 20 mm^3 serves as the emission detector. The dosimeter's electronic circuit and graphs showing the dependence of the dosimeter's sensitivity upon gamma-emission energy have been published.

The USA has patented a gamma-emission ionization detector using a nonconducting fluid that is ionized by radiation. The selection of the fluid, the plastic case, and the electrodes will make it possible to create a detector for a broad range of gamma-emission energy. The merits of such a detector are: the possibility for selecting its equivalent density, high measurement accuracy, and low volume in comparison with gas ionization chambers. It is believed that use of the compact tissue-equivalent detector for dosimetry in roentgen research will raise measurement accuracy.

A device for quick simultaneous analysis of a large quantity of radioactive samples has been patented in the USA. A cadmium teluride crystal is used as the detector for each sample. The electric signal produced by the crystal enters the device's memory in parallel with the serial numbers of all of the samples. In prescribed time intervals the master computer block successively displays the reading of each counter. The large number of samples insures better averaging of the statistical result.

11004
CSO: 1801

SOVIET COMMENTS ON CHINESE NAVY DEVELOPMENT

Moscow VOYENNYYE ZNANIYA in Russian No 8, Aug 80 signed to press 9 Jul 80 pp 30-31

[V. Stepanov article: "Beijing's Buildup"]

[Text] The policy of the present Beijing leaders, which is hostile to peace and socialism, is based on hegemonism, anti-Sovietism and militarism and pursues the far-reaching goals of realizing Mao Zedong's designs concerning world domination. A map issued in China back in 1974 drew the PRC's borders such as to embrace considerable territory of Vietnam, Laos, Kampuchea, Malaysia, Burma, Mongolia, the Soviet Union and other countries.

Nor have the ocean expanses been forgotten by the Maoists. In the "PRC Atlas" published by Beijing in 1973 all the archipelagos and islands of the South China Sea are designated as belonging to China, and in the 1978 "Atlas of Chinese Provinces" China's sea boundaries extend right up to the Philippines, Brunei (the island of Kalimantan) and the coast of Vietnam, that is, considerably further than the boundaries recognized by international law.

All this is an expression of the great-power, hegemonist plans for realization of the age-old dream of representing China as the "celestial empire." Back in 1959 the "helmsman" Mao pontificated: "We must conquer the globe, the entire globe--this is our goal!..."

The Maoists have repeatedly attempted to convert their aggressive intentions into a variety of actions. In the last two decades the Chinese have provoked and unleashed on the land and sea boundaries and their adjacent territories and islands considerably more armed incidents and clashes than have occurred in this time worldwide.

In 1956 China attempted by force of arms to appropriate a substantial part of Burmese territory, and in 1959 a subject of Chinese claims was India, which was invaded by Chinese troops in 1962, seizing 36,000 square kilometers of Indian territory.

In January 1974 Chinese armed forces, with the help of ships and aircraft, seized the Vietnamese Paracel Islands in the South China Sea. Beijing has repeatedly laid claim to the Senkakus (Japan) and in 1978 attempted to underpin its rights to these islands with the help of armed patrol craft and ships. The islands of the Spratley archipelago, far to the south of the PRC, give the Chinese aggressors no peace--they are not adverse to getting a grip on these also. This interest in the islands in the South China Sea is primarily connected with the prospects of the discovery of oil deposits in its shelf.

Possessed with the idea of hegemonism and anti-Sovietism, China's rulers are linking up increasingly closely with imperialism. The American-Chinese partnership began to be actively developed back in the 1970's. The so-called "Pacific doctrine" advanced by President Ford in 1975 assigned China the role of a kind of U.S. partner in the "American presence" in the Pacific. Currently official representatives of the White House do not conceal the fact that they see China as a political ally whose positions on the majority of international problems concur with U.S. interests. Secretary of Defense H. Brown expressed himself sufficiently candidly in the U.S. Senate in 1979, declaring that "China supports a stronger NATO bloc, approves of the American-Japanese alliance and applauds our presence in the Western Pacific." The journal AFRIQUE-ASIE, which is published in Paris, emphasized in the article "The Washington-Beijing Axis" the idea that the Chinese leadership needs the noise it has made concerning an imaginary Soviet threat on the Indochina peninsula to disguise its intention of establishing its domination there.

In the past Beijing lent verbal support to the proposals for making the Indian Ocean a zone of peace, attempting to utilize this for propaganda purposes and show itself as a peace lover. But in fact the United States and China are now doing everything to complicate the situation in this region.

An American squadron of over 30 ships has been plying the waters of the Indian Ocean for several months now, targeting missiles and aircraft at the countries of the region. This "deterrence posture," which has been assailed by the world public, has been to the liking of the Beijing ringleaders, who have long been attracted by the South Asian subcontinent and the Indian Ocean. The real purpose of the Karakorum Highway, which was built by the Chinese and which enables Beijing to reach the seaboard of the Arabian Sea via Pakistan, can be traced more distinctly in this connection. Incidentally, two Chinese ASW ships were handed over to the Pakistan Navy this spring. The United States, meanwhile, has not objected to the possible appearance of Chinese naval forces in the Indian Ocean and to a certain extent is even endeavoring to accelerate this. Increasingly common interests of the newly revealed friends are emerging in the Pacific also. As foreign observers note, the establishment of diplomatic relations between the United States and China and the conclusion of the Japanese-Chinese treaty pursue far-reaching goals of coordinating the joint efforts of Washington, Beijing and Tokyo to establish "leadership in the Pacific" and cobble together there a large-scale imperialist bloc with the enlistment of a number of countries of the Pacific. Taking advantage of Beijing's aggressive aspirations for its own ends and directing them in the channel necessary for the United States--this is the essence of the present stage of American-Chinese relations from the viewpoint of the White House.

Beijing's overseas plans assign an appreciable role to the naval forces, whose strength has been built up rapidly in recent years. The plan of the general modernization of China's armed forces provides for the creation of naval forces capable of operating not only in coastal areas (as was their purpose previously) but also on the broad ocean expanses. As can be seen from material of "Jane's" reference work for 1979-1980, China's naval forces consist of ships, naval aircraft and marine infantry (according to other information of the foreign press, the naval forces also include shore batteries and missile units). They are constituted in three fleets in basing and operational intent. The Northern Fleet--the Yellow Sea and the northern East China Sea, with its headquarters in Qingdao. The Eastern Fleet--its zone is south of the port of Lienyuenchiangshih with its headquarters in Shanghai. The zone of the Southern Fleet embraces the South China Sea and has its headquarters in Zhanjiang.

In turn, the fleets incorporate naval bases and marshaling points. The total strength of naval personnel is approximately 300,000 (192,000 on the ships, 30,000 in naval aviation and 28,000 in marine infantry).

Fighting strength consists of over 1,500 ships, patrol craft and assault-landing and auxiliary ships, a considerable proportion of which are already obsolete. In the number of personnel and ships China is among the first three maritime powers, and, as is clear from information of the journal NATO'S FIFTEEN NATIONS, the number of ships of the Chinese Navy has doubled in the past 10 years. China is carrying out a great ship-building program and even now has the world's most numerous group of light forces (over 700 high-speed guided-missile and motor torpedo boats and gunboats) and an impressive number (more than 80 units) of submarines.

Insofar as there is a tilt toward the missile armament of the ships, eight guided-missile destroyers and frigates (escort ships) built in national shipyards have been introduced to the naval forces in recent years alone. The ["Lyuyda"]-class guided-missile destroyers which are becoming a part of the fleets' fighting strength have a great displacement (approximately 4,000 tons), attack missiles (two launchers) and gun mountings (4 X 130-mm guns). The speed of passage of such ships is more than 32 knots. The ["Kiang Tung"]-class frigates which are being built with a displacement of approximately 2,000 tons have a speed of passage of 30 knots (55 kilometers per hour) and are armed with two anti-aircraft guided-missile complexes, two twin 100-mm gun mounts and four twin 37-mm automatic anti-aircraft guns. The ["Khay Dau"]-class guided-missile boats with a displacement of approximately 300 tons and a speed of up to 35 knots continue to be built. They are armed with six antiship attack missile launchers and two 57-mm gun mounts.

The foreign press has reported the presence in the Chinese Navy of two diesel-powered guided-missile submarines with a displacement of approximately 3,000 tons carrying three attack missiles with a range of up to 1,000 kilometers.

China's naval forces also include more than 25 destroyers and escort ships, from 35 to 50 ASW ships, 150 patrol boats and 17 naval minesweepers. There are 60 ships and boats and a large number of assault-landing craft and boats (over 450 units) for the assault landings of ground forces and marines.

China has long been carrying out scientific and practical work in the sphere of nuclear and missile technology. Despite the veil of secrecy, the foreign press has reported the start of the construction of nuclear submarines in China.

In developing its ship-building industry China is displaying great interest in new European and American arms and equipment, particularly for the heavy ships. China's naval aviation has an aircraft fleet of approximately 600 units, approximately 160 bombers and torpedo bombers and dozens of antisubmarine aircraft and helicopters and transport and special aircraft. Organizationally naval aviation consists of several air divisions. With regard for the pact which has been achieved with the West recently a renewal of the obsolete fleet of aircraft is anticipated. The coastal missile and artillery units consist of launching batteries of "shore-to-ship" aerodynamic missiles with a range of several dozen kilometers and large- and medium-caliber artillery batteries.

China has a rapidly growing transport fleet consisting of approximately 720 ships with a total displacement of 5.2 million tons. This fleet is being developed thanks to national ship building and purchases of ships abroad. The Chinese maritime transport fleet is now actively used to ship raw material for the PRC's military needs and supplies of weapons to reactionary groupings in South America and Asia.

Work is being performed on expanding and reequipping the ports and building new harbors to provide for the basing of the naval forces and the transport fleet.

The preparation of southern marshaling points has been under way recently in consideration of aggressive intentions with respect to the neighboring Socialist Republic of Vietnam.

Skilled personnel for the navy is being trained in earnest in a ramified network of naval schools, colleges and academies in the cities of Shanghai, Dairen, Nanjing, Qingdao, Yulin [Lyushun] and others. In 1978 the PRC enacted the law "On Active Military Service," which introduced compulsory and voluntary active service, the period of compulsory service in the navy here being set at 4-5 years (5 years on ships). Periods of up to 15-20 years are established for voluntary service in accordance with the contract.

The system of training and ideological indoctrination of the personnel for the navy, as for all the armed forces, is based on fierce anti-Sovietism, great-power chauvinism and the need to prepare for war. Chinese youth drafted into the army and navy is raised from its childhood in a spirit of hatred of the Soviet Union. The truth of the great disinterested assistance which the Soviet people rendered China in fulfilling their international duty in the years of the country's liberation from the Japanese militarists and the accomplishment and development of the Chinese revolution is concealed from it.

A careful selection of the new recruits, primarily in accordance with the principle of blind devotion to the Maoist leaders, is made for service in the navy.

Recently U.S. Secretary of Defense H. Brown promised to assist China in modernizing its navy. There are reports of China's having concluded long-term contracts with certain military concerns of Japan also.

Converting the country into a military camp and tightening the people's "belt" for the sake of preparations for war does not suit the ordinary Chinese working people. To the detriment of their vital interests Mao's successors intend to utilize a considerable proportion of the financial resources on modernizing the army and navy for the embodiment of their hegemonist designs.

China's aggression against socialist Vietnam showed not only the hopelessness of these designs but also China's armed forces' inadequate preparation for combat operations. And, consequently, the military-political and moral defeat of the Chinese expansionists.

The peoples of the world are maintaining a watchful eye on the Beijing leaders' intrigues and decisively condemn China's aggressive foreign policy course.

8850
CSO: 1801

CIVIL DEFENSE: TRAINING AND RELATED ACTIVITIES

In the City of Narva

Moscow VOYENNYYE ZNANIYA in Russian No 9, Sep 80 signed to press 7 Aug 80 pp 14-15

[P. Gorbunov report: "Communists: Blend of Will and Expertise"]

[Text] Narva--The following report reached the "Krengol'mskaya manufaktura" Combine at a time when a meeting of the party-economic activists was being held: hurricane-force winds and a heavy snowfall had halted train and motor-vehicle traffic throughout Estonia. The nonmilitarized civil defense formations with equipment were alerted for road clearance in the republic.

And there immediately followed the command of the installation civil defense chief: "Command personnel of the composite detachment to the exit. Rest, stay put."

Some 20 communists left the hall. While the situation was being explained to the meeting the installation civil defense chief was setting the detachment commander the following assignment: "Concentrate mainly on saving the raw material storehouse and clearing the 'wide track' to insure delivery of the materials to all the factories."

The detachment personnel was assembled, and the equipment was brought up: bulldozers, crane trucks and dump trucks. The snow was blinding and lay as a thick cover on the windshields in the drivers' cabins, the "yard men" not [illegible] had time to rake it off. The detachment began to operate under these conditions, carrying out a far from simple assignment.

Closing the party-economic activists' meeting, M. Klyushnikova, secretary of the combine's party committee, said in parting:

"Our collective's covering force is currently battling the elements. We must not allow even a single machine tool or a single unit to stand idle. We are obliged to fulfill the production plan despite the elements."

"Yes...," communist N. Zemlyanko, commander of the composite detachment, recalled. Our motor vehicles with their freight followed in the wake of the bulldozers along the 'wide track'." This is the ramps of railroad and motor transport to the combine's factories, shops and sections. The detachment's fighters and commanders battled the elements."

The teams, groups and sections were headed by communists--experienced people and skilled educators. Valentin Ivanovich Grachevskiy, political office of this formation, is a member of the party bureau of the chief mechanic's department. He has been active in civil defense for 18 years now. The rescue teams and groups are commanded by the communists A. Sorokov, I. Kobrin, I. Kublitskiy, V. Kim, N. Petrov, V. Fedorov, D. Karasev, N. Frolukov, N. Zolin and others. The detachment has 47 CPSU members and 27 Komsomol members altogether. The commander and political officer rely on these active members in all training and political education work with the personnel upon the fulfillment of set assignments.

A few words about the detachment commander. Nikolay Zemlyanko was called up into the Soviet Army in the war year of 1943. After the war, he participated actively in the reconstruction of Narva, which had been devastated by the German fascists, and in setting up production at the factories of the "Krengol'mskaya manufaktura" Combine. He was simultaneously engaged in correspondence study in Leningrad's Textile Institute and received the diploma of textile specialst. He has been deputy chief mechanic since 1975.

Since that memorable winter with which we began this account, Nikolay Semenovich has repeatedly had to carry out the most difficult assignments with his detachment.

Old buildings had to be demolished in accordance with the plan for the combine's modernization. The detachment had completed general and specialized training by that time. It just remained to conduct a specialist arm tactical exercise to consolidate the knowledge and skills that had been acquired. It was thereupon decided to simulate centers of damage here to create difficult conditions for the operations of the detachment personnel and simultaneously accomplish an economic task.

This proved to be no easy matter. The rescue workers A. Artamonvov, Z. Lillemyae, V. Dubrovskiy and others operated skillfully.

"These fighters are distinguished not only by boldness and quick-wittedness," their commander I. Kobrin said, "but also a high awareness of their responsibility for their entrusted assignment. It is difficult to control oneself when danger is right before one's very eyes. But, summoning their will, they found a way out of the difficult situation."

Fires were simulated and a complex radiation situation and many "casualties" were created at the exercises--a broad front of operations for the scouts, rescue workers and members of the volunteer medical squads. They operated in gas masks, as a rule, not allowing hypothesizing.

The endeavor to teach what is required under actual conditions is an indispensable rule followed by the detachment's commanders and political information workers.

Command staff exercises with the involvement of a number of nonmilitarized formations were conducted at the combine this May. O. Klushin, chief of civil defense of the installation, ordered Chief Power Engineer V. Ryabov, chief of the power and blackout service, to repair a damaged overhead power line with the resources of the emergency-engineering group interacting with subunits of the composite detachment. It was decided in the course of the exercise to conceal it underground and thereby increase the stability of power supply under special conditions. An emergency situation was created for this for training purposes.

The formations were alerted and swiftly went into action. The fighters of the detachment's first rescue team (commanded by V. Fedorov) coped successfully with their assignment. They dug out a trench. The emergency-engineering team (commanded by V. Goryunov) followed them, laying the cable. The detachment's remaining subunits were at this time practicing training assignments in a specially simulated center of damage (search for and rescue of casualties, administering first aid to them, clearing away barriers and such). This combination of training assignments with operations useful for production approximates the training of the nonmilitarized formations to actual conditions in the best possible way.

And it must be said that the combine managers and civil defense staff of the installation do this skillfully, striving for the greatest returns from conducting such training measures. This is also of considerable effect in the sense of moral-political and psychological training.

Political Officer V. Grachevskiy described political work in the detachment and the forms thereof.

"The difficulty lies in the fact that people here are of different ages and have different levels of education and political training," he said. "A different approach is needed for each of them. It is important to pay attention not only to how a person works in his job but also how he performs his civil defense duties. And this is made easier to a certain extent by the fact that the detachment's teams and groups have been formed on the basis of the structural subdivisions of a department. In the main, people are subordinated in their job and in the formation to one and the same official. He is, say, the foreman and, in the formation, the commander of the rescue group. Thus we have an opportunity to influence each fighter during work and also in the course of practical drills and exercises. The party group and union organizers help here.

"Temporary party groups are created here for the period of the exercises to perform specific assignments envisaged by the plan for political work with the personnel under special conditions. The teams' political officers rely on them.

"In explaining to the personnel the domestic and foreign policy of the party and government and the tasks to strengthen the country's defense we link them with the goals and tasks of the upcoming exercise. We pay serious attention to the theoretical and practical preparation of all commanders and fighters for fulfillment of the assignments of the exercise. For this purpose we practice monitoring checks in order to uncover shortcomings in good time and put an end to them."

The political officer takes an interest in everything: the assembly of the personnel and the equipment of the detachment's subunits, the organization of the messing and the distribution of cultural-educational equipment. There are no secondary matters here, everything is important. He briefs the agitators and editors of the operational newssheets, for example. Among other questions, particular mention is made of the need to observe safety procedures. Special colloquia in each subunit are conducted on this subject. The detachment's fighters have to operate under various conditions and perform dangerous work. But there has not been a single accident or injury. And this is thanks to the fact that teaching and instructional work is performed constantly in this field.

Valentin Ivanovich drew attention to an aspect which has to be considered from the viewpoint of moral-political and psychological training. Sometimes in piling it on we frighten people and engender in them timidity and fear. A prudent caution and an ability to avoid accidents have nothing in common with cowardice. On the contrary, only high qualities of determination, quick-wittedness, an ability to get one's bearings in extreme conditions and a profound knowledge of safety procedures will yield success in operations in a center of damage.

The forms of political work in the detachment in the period of rescue and emergency-repair operations directly in the center of damage change abruptly. The main thing is the personal example of the communists and the commanders and their mobilizing words. It is important to issue on a current basis operational newssheets reflecting the boldness, enterprise and qualities of the will of the fighters and their commanders in the fulfillment of set assignments and eliminate shortcomings decisively and without delay.

"If we are speaking of personal example," Detachment Commander Zemlyanko observed, "I can confidently say that all our subunit commanders and all communists and Komsomol members set such, particularly in the course of the performance of assignments under difficult conditions. Take Sorokov--the commander of the second rescue team. He is a man of advanced years and has been an active participant in all civil defense measures for 15 years now. And, of course, it is now difficult for him to work for any length of time with a gas mask. Sometimes the young ones cannot endure it and tear off their helmet facepieces. But he patiently endures all this. As a communist and a commander, he permits no leniency. These are the sort of people we have."

Thus is a blend of will and expertise achieved in the correct organization of teaching and instructional work. And there are more than sufficient examples of this when one is acquainted with the deeds of this detachment's commanders and political workers.

In the Belorussian SSR

Moscow VOYENNYE ZNANIYA in Russian No 9, Sep 80 signed to press 7 Aug 80 p 15

[Report by A. Lastovskiy, deputy chief of staff of the Belorussian SSR Civil Defense Fire-Prevention Service: "For Fighting Fire"]

[Text] On the initiative of the Belorussian SSR Civil Defense Staff a special republic training center was set up last year at a Minsk enterprise. A whole section containing photographs, models, drawing boards and working stands is devoted therein to questions of installations' fire resistance. The layout of a conventional city is represented on one of them. Persons receiving instruction may master both basic and urgent engineering-technical fire-prevention measures with the help of electric bulbs which light up.

Automatic installations and fire-warning alarms are increasingly becoming a part of the arsenal of the technical means of fire fighting, and this is strikingly shown at the exhibition. Many of Belorussia's depots and storehouses and sales enterprises have already been equipped with such facilities. And this is the result. Last year, for example, there were 17 recorded instances in the republic of the successful functioning of automatic fire extinguishers and alarms, which enabled us to prevent big fires.

Diagrams of the fire-extinguisher installations and automatic fire-prevention equipment are also shown on the stands. And a model of a convection furnace and a kerosene hydrorefining reactor shows how to pour off the oil products into an emergency tank, release the extinguishing steam, create screens to protect the furnace's structures and monitor the temperature behavior. The model's electric circuit is connected with the working stand of an automatic machine on which a sensor and fire-alarm receiverare installed. The purpose of individual components of the alarm installations is shown in action.

A separate stand accommodates prints of national economic equipment which can easily be adapted for extinguishing fires. The specifications and a list of the necessary additional installation work which can be performed right on the spot are given here.

Alongside the stands is a variety of fire-fighting equipment and primary fire-extinguishing means.

The training center operates on a permanent basis. Civil defense staff, instructional course and service workers conduct classes with the leaders of ministries, departments and installations, chief specialists and formation commanders. The creation of such centers everywhere would enable us to solve the problems of an increase in the fire resistance of the operation of sectors, associations and installations of the national economy in a more qualified manner.

In the City of Tashkent

Moscow VOYENNYYE ZNANIYA in Russian No 9, Sep 80 signed to press 7 Aug 80 pp 16-17

[Report by Col Kh. Tuychiyev, chief of the civil defense staff of Tashkent: "That Anxious Night"]

[Text] Such natural disasters as an earthquake, mud streams and floods have repeatedly put our nonmilitarized formations on the alert. And this year also the elements again tested their readiness.

Storms thundered, there were downpours with hail, and winds, gusts of which reached 30 meters per second, roared on the night of 28-29 April--on the eve of the May Day celebrations--in Tashkent and a number of other cities and rayons of Uzbekistan. In Tashkent the storms blew down many trees and in a number of places cut power lines and damaged aerial lines of communication. Certain utilities suffered, and a few apartment houses, schools and preschool establishments were damaged in a number of areas. Some basements were flooded.

The civil defense staffs, services and nonmilitarized formations of the city and its rayons and economic installations were put on the alert.

The shift of senior traffic controller L. Naberukhina consisting of R. Sabirova, V. Vorob'yeva and L. Klimenko was on duty that night at the central fire-liaison station. Fires were reported from time to time from the rayons. Having reported this to B. Kasimov, chief of the fire-prevention service, on his instructions Naberukhina quickly dispatched field patrols in response to the calls. Reserve equipment was assigned for the various tasks.

The chief of the city's fire-prevention service set up a special fire-extinguishing staff consisting of captains R. Saparov and M. Inoyatov and Sr Lt B. Ryksiyev. R. Saparov said that all the field patrol turnouts entailed a risk to life. Flashes from the short-circuiting of power lines occurred in the streets from time to time.

The boldness and skill of the people who entered into battle with the elements forced the disaster to retreat. It took only 6 minutes to put out the fire in a building of the textile combine's joint railroad system. By their personal example the patrol chiefs Ya. Divayev and M. Inogamov and the squad commanders T. Nuretdinov and A. Murtazin mobilized the fighters for rapid and efficient operations. That night Divayev, interacting with Patrol Chief M. Rustamov, skillfully organized the fight against a fire which had broken out in the dining room of a gas station. The guard of the fire-fighting team of S. Inogamov and Sr Lt B. Umbetov put out the blazing roof of a house on ulitsa Temir-Yuly in 7 minutes. Squad Commander M. Sharipkhodzhayev and the firemen M. Mirkhasimov, B. Minginbayev and others particularly distinguished themselves.

Thus thanks to the high state of readiness and courage of the firemen, all the fires were quickly put out and buildings and physical assets were saved from fire.

It was not easy for the labor collective and nonmilitarized formations of the streetcar-trollybus administration. Trees blown down by the hurricane had fallen on certain tracks on the live wires of the circuit, breaking them. A number of bearings and cantilevers had been smashed. As a result the movement of urban transport along eight streets and in the region of the medical institute's military-training cantonment temporarily came to a halt.

V. Zagumennov, chief of civil defense of an installation, assembled the managerial staff and, assessing the situation, dispatched an emergency-engineering team with equipment to these routes, strengthening it with workers who were not part of civil defense formations. Streetcar and trolleybus traffic on all the main routes had been restored by 6 am. Particular mention should be made of I. Kandrin, commander of the emergency-engineering team, M. Babadzhanov, deputy for political affairs, Group Commander Z. Aripov, section commanders V. Galimova, S. Dadabayev and M. Pirmukhamedov and privates M. Saidbekov and V. Kachanov. They were commended in an order of the installation's civil defense chief for the excellent performance of the set tasks to liquidate the consequences of the elements.

The entire population participated actively in the skirmish with the elements, displaying organization and discipline. Great credit here is due to the party and soviet authorities and the services for maintaining public order. The communists, people's deputies, civil defense staff workers and the police were in the most critical spots and performed explanatory work among the public, reporting on the situation and the steps being taken.

Clearing the streets and repairing the damage done to residential and industrial buildings lasted several days. The gorispolkom and rayispolkoms organized a survey of apartment houses. Those that had suffered were given material assistance. They were supplied with slate, glass and other building materials for renovating damaged houses and apartments.

Not only the city's civil defense formations but also the population participated actively in clearing the streets and parks of fallen trees. The local soviets allocated motor transport and equipment for this purpose. In Kuybyshevskiy Rayon ulitsa Zhukovskogo and others were cleared of fallen trees by officer candidates of the Tashkent Higher Combined-Arms Command School imeni V.I. Lenin. The civil defense emergency-restoration group of the "Etalon" Experimental Plant headed by Group Commander A. Ishmukhamedov took an active part here in restoring power and communication lines.

In Khamzinskiy Rayon great assistance was rendered in liquidating the consequences of the elements by the civil defense rescue team of the Aviation Production Association imeni Chkalov. It cleared a number of streets of fallen trees and repaired power and communication lines, which facilitated the normal movement of urban transport. A. Spirin, commander of the rescue team, G. Tsyba, deputy commander for political affairs, Group Commander V. Ul'yanov, section commanders V. Danilkin and E. Sagdeyev and rescue workers I. Ivanov, V. Loginov and A. Kvashkin displayed high organization in this strenuous work.

A comprehensive installation exercise was held 4 days prior to the hurricane at Footwear Factory No 2 (Chilanzarskiy Rayon). The elements inflicted considerable damage on the installation and the adjoining streets. The civil defense formations, enriched with the experience of the recent exercise, kept cool. Thus a composite group led by its commander G. Tsybyzov and Political Officer A. Igamberdyyev joined in the work immediately and had basically removed the consequences of the hurricane in 24 hours. Kh. Mizratov, commander of the emergency-engineering squad, lathe hands V. Izotov and V. Isayev, metal cutter P. Likhin, rescue worker I. Domov and others toiled selflessly. The factory collective successfully fulfilled the pre-May socialist pledges.

CD Film Described

Moscow VOYENNYYE ZNANIYA in Russian No 9, Sep 80 signed to press 7 Aug 80 pp 16-17

[Unattibuted report on civil defense film: "Facing the Danger"]

[Text] This is the title of a new film* which consistently and convincingly portrays the history of the inception and development of local air defense and the coming into being of civil defense.

The task of protecting people in cities deep in the rear arose back in the first years of Soviet power. Air defense measures were adopted at that time of difficulty for the Soviet power. Special centers were opened where it was possible to obtain protective masks, decontamination liquid and instructions on how to avoid being poisoned by toxic gases. People checked out the gas masks in gas chambers. The Society for Assisting the USSR's Defense and Aviation-Chemical Construction played a big part in preparing the population for air defense and CW protection in that period. Standards for presentation of the "Ready for PVKhO" (air defense and CW protection) insignia were established.

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*A five-part popular science civil defense film produced by the "Ukrkinokhronika" Studio in black and white.

On the screen we see chemical warfare competitions, marches in gas masks and the first exercises of the local air defense formations. At enterprises and in establishments people acquire the habit of working in gas masks.

Twentytwo June 1941. Fascist aircraft are bombing our cities. Buildings are being destroyed. Local air defense formations are carrying out rescue work, pulling the injured out from under the rubble and administering first aid, putting out fires and defusing unexploded aerial bombs.

The film makes use of expressive frames of the work of local air defense in blockaded Leningrad. Starving people, worn out with the shelling and bombing. But each at his post: some on the roofs of houses, others at enterprises making shells and mines and repairing combat equipment.

The war passed. The Soviet people had not only endured but conquered.

Now bellicose imperialist circles are intensifying the arms race and building up the combat might of the aggressive blocs. They are creating new types of weapons. Appropriations for military needs are growing in unprecedented fashion. Hotbeds of war are flaring up now here and now there in the world. The launching of missiles of various roles and NATO bloc troop exercises are shown on the screen.

Under these conditions the Communist Party and the Soviet Government are displaying constant concern to strengthen our country's defense might and improve civil defense.

The viewer sees a missile subunit of the Soviet Armed Forces on the march. Air defense forces' interceptor flights take off from an airfield. Radar stations. Soldiers work at the radar screens and other instrumentation. They are on guard of peace. The alarm sounds in the missile subunit. The combat crew takes its places.

An overall view of a large plant. The city living a peaceful life. But people are preparing for defense against modern means of mass destruction. The civil defense leaders and command and supervisory personnel are undergoing instruction at courses and in the installations. A command staff exercise is under way at the control post.

It should be mentioned that the film provides extensive coverage of the operations of the nonmilitarized formations in the "center of damage." The conditions are as close to real as possible. The viewer sees the entire multiformity of procedures and methods of rescue work. Big fires are shown on the screen, but the fighting men of the formations operate actively and boldly, showing how high their moral-political and psychological preparation is.

And those who are not a part of the formations are also preparing for defense--they are passing civil defense standards: putting gas masks on themselves and "casualties," preparing cotton and gauze bandages and practicing self-help and mutual assistance methods.

There are drills with pensioners. Film Director Valentin Sperkach has hit on motion-picture methods of showing grandfathers and grandmothers instructing children in defense.

The film shows the system of training student youth and children. Second-grade students are familiarized with gas masks and respirators and are taught how to act when the "Air Raid" warning sounds and also the rules of behavior in protective installations. VUZ students study protective measures with regard for their future special field and defend diploma projects on civil defense subjects.

The film concludes with a showing of a comprehensive installation exercise. All categories of the population participate. This is a kind of examination where readiness for action under the conditions of centers of damage is checked out.

This film could be employed extensively at civil defense courses and installations of the economy and in educational institutions. It will undoubtedly positively influence an increase in the quality of the training not only of the civil defense leaders and command and supervisory personnel but also various categories of the population and will contribute to the cultivation in Soviet people of a correct understanding of the tasks accomplished by civil defense under modern conditions.

In Bukharskaya Oblast

Moscow VOYENNYYE ZNANIYA in Russian No 9, Sep 80 signed to press 7 Aug 80 p 17

[Report by Lt Col V. Meshcheryakov, chief of staff of Navoi's civil defense: "First Rally of Civil Defense Standouts"]

[Text] Bukharskaya Oblast--Our construction workers have for the first time held a rally of civil defense standouts, which will unfailingly become traditional. A detailed report was delivered by Reserve Lt Col N. Grishmanovskiy, chief of staff of the project's civil defense. He described in detail the work to increase the readiness of the project and the formations for defense against modern weapons. The enterprise currently has 29 USSR Civil Defense standouts.

The standouts' current motto is "There Must Be No Laggards Alongside the Standouts." Systematic, purposeful party-political work and civil defense propaganda are essential to prepare the basis for a constant increase in the ranks of the frontrunners. It would be correct, the rally's participants observed, for each communist and Komsomol member to become a civil defense standout in 1980-1982. This would be the best example for nonparty persons.

The rally's participants adopted an appeal to all formations of the construction project's civil defense and also outlined the USSR civil defense standouts' tasks for 1980-1985, which says, in part: "We appeal to all fighting men and commanders of the project's civil defense formations to spare no efforts or time, to master military and political knowledge and to hone more sharply their combat expertise."

In the City of Sevastopol'

Moscow VOYENNYYE ZNANIYA in Russian No 9, Sep 80 signed to press 7 Aug 80 p 18

[A. Shernov report: "Winners in the Competitive Review"]

[Text] The Sevastopol' "Znaniye" Society's civil defense city section consists of 23 persons. It is led by I. Galuzinskiy, civil defense staff inspector for propaganda.

In perfecting the work of the section he displays systematic concern to increase the level of knowledge and skills of the propagandists' themselves. Everything new and interesting which he discerns in civil defense propaganda he endeavors to introduce in practice immediately.

The section's members periodically write in the local press and appear on radio and deliver lectures at many enterprises. Implementing the CPSU Central Committee decree "A Further Improvement in Ideological and Political Education Work," the civil defense section has mobilized the lecturers for propaganda of the precepts of V.I. Lenin, the decisions of the Communist Party and the provisions of the USSR Constitution concerning the defense of the socialist fatherland and the heroic traditions of the army, navy and civil defense.

Talks are given and films are shown in the Lenin study centers attached to the housing-operation offices and at open summertime venues. A group of the section's lecturers consisting of M. Kozlov, V. Larionov, V. Balyshev and R. Pinchuk visited the sovkhozes imeni S. Perovskaya, "Kachinskiy" and "Sevastopol'skiy," where it delivered reports on civil defense.

The communist A. Priymak, a member of the section, is considered one of the best propagandists. Of most importance in his methods are logic of exposition, persuasiveness of argument and an ability to portray a theme strikingly and tie in special questions of civil defense with the tasks being accomplished by enterprise, establishment, kolkhoz or sovkhoz collectives.

Every speech of section member M. Kozlov is also imbued with a spirit of high party-mindedness and militancy. He skillfully exposes the aggressive essence of imperialism and the cunning plans of the "cold war" apologists. The propagandist's success lies in conscientious preparation for his speeches. He "gets the feel" of the material, as it were, and for this reason virtually never uses a written text and expounds his ideas fluidly. As a rule, his speeches develop into a lively, unconstrained discussion in which the whole audience participates.

Other of the section's propagandists are also working well. Thus is was not fortuitous that a republic jury determined it the winner in a competitive review and awarded it a diploma I class and a cash bonus. And in the upcoming training year also the section intends to hold on to the positions it has won, increase the efficiency and specificity of civil defense propaganda and strengthen its connection with practice.

In Kuybyshevskaya Oblast

Moscow VOYENNYYE ZNANIYA in Russian No 9, Sep 80 signed to press 7 Aug 80 pp 18-19

[Article by F. Korol'kov, assistant chief of staff for propaganda of Kuybyshevskaya Oblast's civil defense: "An Effective Form"]

[Text] In drawing up a 2-year forward plan of civil defense propaganda we provided, among other measures, for civil defense days, weeks and months to be held in the cities and rayons and at industrial installations of the oblast. The CPSU Central Committee decree "A Further Improvement in Ideological and Political Education Work" was the core of the civil defense propagandists' activity in this sphere.

We already have certain experience of holding civil defense days and weeks here. But how to conduct a month-long campaign in a city or rayon? The RSFSR Civil Defense Staff decision to conduct a training-methods course in the city of Novokuybyshevsk helped. A civil defense month of the city of Novokuybyshevsk and comprehensive installation exercises were chosen as the "tactical" background for this measure. Taking account of the fact that this would be the first time a month-long campaign would be held on a city-wide scale, the oblast staff and its party and labor union organizations joined in this work actively. The party bureau discussed organizational questions of the preparation and holding of the month-long campaign, drew up a concrete plan of assistance to the city organizations and installations, held a party meeting and set each communist concrete assignments.

The first major measure of the month-long campaign was a meeting of the city's defense activists. The meeting was addressed by V. Kiryushkin, first secretary of the Novokuybyshevskiy Gorkom, V. Shevchenko, chief of the city's civil defense, and Col A. Shevchenko, chief of staff of the oblast's civil defense. They set the managers of installations of the economy concrete assignments to improve civil defense and implement its measures throughout the year, criticized shortcomings and proposed their elimination as quickly as possible. The results of civil defense competition were summed up here, the winners named and upgraded pledges adopted.

In order to mobilize the party activists in the administrative authorities, services and civil defense formations the gorkom's propaganda and agitation department held an instructional meeting of party committee secretaries, representatives of local party authorities, civil defense formation political officers, party organizers of services and installation civil defense assistant chiefs of staff for propaganda. Then party and soviet workers and members of the civil defense sections of the city and primary organizations of the "Znaniye" Society delivered reports and lectures on civil defense to the labor collectives of the city's installations of the economy. A successful city evening of young people meeting with Great Patriotic War veterans was also held.

Cultural establishments have made their contribution to civil defense propaganda. With the help of visual agitation which is replenished in the city's Palace of Culture imeni V.I. Lenin and clubs and movie theaters they have convincingly described civil defense matters and its frontrunners and veterans and how pledges regarding production indicators and civil defense are being fulfilled. The movie theaters have shown the films "Facing the Danger," "Ingredients of Stanchness," "Rescue Work Methods," "True to Mercy" and "When the Elements Rage." Civil defense specialists addressed the audience in the intervals between performances.

In accordance with the plan of the civil defense month, the DOSAAF Gorkom held a 3-day motorcross autorally. The sportsmen's cars carried the slogan "Civil Defense--A Matter for Each and Everyone!" Rifle competitions among the teams of industrial enterprises, organizations, schools, urban vocational-technical schools and tekhnikums, in which several thousand persons participated, were also held successfully.

The gorkom's stationary and mobile civil defense propaganda posts were true centers of the popularization of civil defense and the working people's military-patriotic education. Their work was headed by M. Kazakov and A. Kamenev, instructors of the propaganda and agitation department, and N. Anisimov and L. Komlev, deputy secretaries of enterprise party committees. The dozens of attractively arranged drawing boards and stands with which these posts were equipped vividly reflected the achievements of the staffs, services, courses and formations in the accomplishment of civil defense tasks.

At the decision of the gorkom bureau the amateur film studio of the petrochemical combine began shooting the training film "With a Party and Komsomol Card in One's Heart" during preparations for and the holding of the month-long campaign and further planned measures of civil defense. It is an account of the plant party committee's party-political work in the period of the comprehensive installation exercise and just prior to it.

The mass information organs and media conducted extensive propaganda work. It should be said that the publication of special-subject issues of city, rayon and large-circulation newspapers devoted to civil defense has long been a practice in the oblast. This tradition has also been followed in Novokuybyshevsk. Two issues of the city newspaper ZNAMYA KOMMUNIZMA and special issues of the large-circulation papers ZA PEREDOVUYU STROYKU, BOL'SHAYA KHIMIYA and NEFTEKHIMIK have been published. The press articles were well illustrated with photographs of episodes from the exercises, drills and competitions.

The civil defense day conducted in accordance with a separate plan was the culmination of the month-long campaign. A large quantity of ferroconcrete blocks, defective structures, worn automobile tires, spent oil and pyrotechnical means had been delivered ahead of time to the area of the civil defense cantonment, where a center of multiple destruction had been simulated. When the center "began to work," it made an impressive picture. Thick black clouds of smoke, fires, difficult obstacles, the devastated skeleton of a brick building, people in need of immediate medical assistance--all this created an impression of the real difficulties of a combat situation and contributed to cultivating in the personnel of the civil defense formations high moral-political and psychological stanchness.

Ground and, with the help of a helicopter, aerial reconnaissance was carried out quickly, military-style. The reconnaissance information was analyzed, and a decision was made to undertake rescue and emergency-restoration work. The fighting men of the civil defense formations rushed to the center. Each knew precisely his mission. Powerful equipment was used in clearing the obstacles: cranes, bulldozers and excavators were at work. Men of the fire-fighting formations attacked the fire. Stiff jets of water and flakes of foam extinguished the fire. The chains of the voluntary aid detachment and rescue workers evacuating the "injured" stretched from the upper stories of the building and from the basements and shelters.

Under the leadership of the commander of their section, S. Argastsev, rescue workers V. Tyrin, A. Voropayev, P. Belenkov and N. Mukhamadayev quickly cleared an obstacle at the opening of a burning building and carried all the "injured" out of the building, which was enveloped in flames. The voluntary aid detachment workers T. Pogodina, L. Andreyeva, L. Vikhreva and T. Chepurina quickly located the "injured," administered first aid and, without waiting for the rescue workers, brought people to the assembly post.

The workers of the city's medical service under the leadership of their chief, V. Ivliva, including physician N. Mitrofanov, political officer of the first aid detachment, Chief Nurse L. Sayapina, chief of staff of the installation's civil defense, Komsomol Bureau Secretary G. Krivonogova and physician O. Zubareva, also operated smoothly. Genuine concern for the people working under the difficult conditions was displayed by workers of the city's trade and catering service headed by A. Pilyayev and M. Saunina, and the signalers of the city's communications service (officer in charge--M. Zhdanov) insured continuous control of all the civil defense measures.

A characteristic singularity of the measures of the civil defense month was the fact that a great deal of work was performed in the course of its preparation and during it on the construction of protective installations and their stocktaking and repair and the adaptation for this purpose of underground premises.

The plan of measures was realized in full. Many comrades were mentioned in the oblast civil defense chief's order on the results of the month-long campaign. It was an example of how much may be done in improving civil defense if people are skillfully mobilized and if its measures and the instruction of all categories of the population and the personnel of the nonmilitarized formations is undertaken systematically and in planned fashion. It is particularly important that civil defense days be held at each installation. Only in this event will we achieve the population's mass participation in civil defense measures and will the days, weeks and month-long campaigns be a magnetic force mobilizing people for active participation in defense work.

In Ivanovskaya Oblast

Moscow VOYENNYYE ZNANIYA in Russian No 9, Sep 80 signed to press 7 Aug 80 p 20

[Article by F. Parshin, deputy chairman of the Ivanovskiy DOSAAF Obkom: "Assisting DOSAAF"]

[Text] The Ivanovskiy DOSAAF Obkom annually draws up a plan of measures geared to an improvement in propaganda among the population of the means and methods of protection against weapons of mass destruction. The plan, which is coordinated with the oblast's civil defense staff, directs DOSAAF activists toward an in-depth explanation to members of the defense society, primarily the youth, of the population's duties in the implementation of civil defense measures.

Hero of the Soviet Union A. Kalabin, V. Vikent'yev, G. Kuz'min, P. Borovikov, B. Durnov, A. Kokorev, members of the permanent commissions of defense-mass and military-patriotic propaganda of the DOSAAF Obkom, and others have given a good account of themselves in this work.

It is perfectly understandable that the effectiveness of the assistance of DOSAAF committees and primary organizations to civil defense is directly dependent on the society's activists' level of knowlege of its goals and tasks and their ability to fulfill in practice the measures connected therewith. Taking the importance of this problem into consideration, many civil defense staffs and DOSAAF committees organize the instruction of the defense society's active members. The oblast's civil defense staff and DOSAAF Obkom have devised a range of subjects of lectures, papers and talks on civil defense for this.

In addition, the curricula of the courses, schools, seminar classes and instructional gatherings of leading DOSAAF workers and activists incorporate such subjects as "Civil Defense Tasks at the Current Stage," "Civil Defense Propaganda--An Important Area of Defense-Mass Work," and others. Civil defense staff and course workers are enlisted to deliver lectures.

Seminars of chairmen and activists of the primary organizations which collate progressive experience of civil defense propaganda have become a part of the work practice of many of the oblast's DOSAAF raykoms and gorkoms. For example, on the eve of exercises in Komsomol'skiy Rayon the rayon's civil defense staff and DOSAAF Committee conducted a joint seminar of primary organization chairmen and enterprise chiefs of staff. As a result the exercises were successful and contributed to a strengthening of the interaction of the DOSAAF members and civil defense workers.

A great deal of work is being performed in this sphere at the basic military training centers. Mastering the rudiments of warfare, the young men also pass civil defense standards here.

Instruction of young draftees is well organized at the Furmanovskaya Factory No 2, where Hero of Socialist Labor Ye. Amosova is deputy director for teaching and instructional work and DOSAAF activist K. Tikhomirov is chief of the training center. We are disseminating the experience of young people's training at this center everywhere. We now see it as our task to improve the methods of the instruction of the young men at the basic military training centers in the "Fundamentals of Civil Defense" subject range, paying particular attention to the molding practical skills in the young men and to moral-political and psychological conditioning. We are planning to make more extensive use of the course training equipment and civil defense training centers for this.

The DOSAAF primary organizations and civil defense industrial installations are, as is known, centers of military-patriotic and defense-mass work. It is precisely here that Soviet people receive practical instruction in methods of protection against modern weapons. It is precisely here, in the worker collectives, that the youth imbibes the glorious revolutionary, labor and combat traditions of the senior comrades and learns to stanchly defend the conquests of the Great October. And, as practice shows, this important task is being accomplished successfully where the civil defense and DOSAAF activists work in close contact.

Such strong relations in our oblast have been established at the majority of installations. Their civil defense staffs and DOSAAF committees conduct defense measures jointly and assist each other in practical work. And, furthermore, the civil defense chiefs of staff are, as a rule, elected to the DOSAAF committees, which facilitates questions of interaction. Many primary organizations participate actively in the preparation and holding of comprehensive installation exercises and in an improvement in the training aids supply and organize for the society's members lectures and reports on civil defense and the showing of films on methods of protection against weapons of mass destruction. Readers' conferences and quiz games on civil defense are also conducted, oral logs are issued and photographic displays and stands and civil defense reading rooms are arranged.

A good initiative, for example, is being displayed by the Ivanovskoye "Avtokran" Association DOSAAF Committee (Committee Chairman--D. Shpotakovskiy). In conjunction with the association's civil defense staff it organizes film shows and lectures on civil defense and trains engineering personnel for the installation's nonmilitarized formations. The DOSAAF members of Ivanovo's Worsted Combine imeni V.I. Lenin (DOSAAF Committee Chairman--Ye. Andreyev) also participate constantly and actively in all civil defense measures. DOSAAF activists are always among the best at the time of command staff and comprehensive installation exercises. And this is not fortuitous inasmuch as, prior to these, they pass civil defense standards in their own defense collective together with the staff. Propaganda of civil defense and assistance to measures thereof are stepped up particularly in the period of defense-mass work months. Elements of civil defense also are unfailingly made a part of competition in types of sport involving military equipment--getting through a contaminated area in protective gear, the cleansing and radioactive decontamination of weapons and equipment, the ability to use radiac monitoring instruments and others. At this same time, as a rule, the DOSAAF Obkom conducts a competitive review of defense work, determining the society's best raykoms and gorkoms. The winners are awarded challenge cups, pennants and testimonials.

We always, for example, note the good joint work of the DOSAAF organization and civil defense in the cities of Kineshma, Shuya, Vichuga, Furmanov and Rodniki. They have achieved genuine coordination and interaction in their work. Under the leadership of the local party authorities they compile joint plans of defense-mass work and civil defense measures, determine their times and executants and monitor fulfillment of what has been planned together. Questions of interaction are periodically discussed at DOSAAF plenums, presidium sessions and conferences and at meetings of the primary organizations and also when summing up the results of socialist competition.

However, as checks show, such contacts have not yet been organized everywhere. Certain DOSAAF committees and primary organizations still do not consider assistance to civil defense their vital concern and remain on the sidelines when it comes to participating in exercises, competitions and other of its measures. For example, the Sokol'skiy, Puchezhskiy and Il'inskiy committees have still not taken practical steps to improve civil defense propaganda.

Nor are things proceeding very well in preparing the nonworking population for civil defense. Realizing this, the DOSAAF activists are helping the civil defense staffs carry out drills with the inhabitants of microregions and delivering lectures to them in accordance with preplanned subject matter. Such drills have already been conducted in Ivanovo's Leninskiy, Frunzenskiy and Oktyabr'skiy rayons. It is essential that analogous work be organized in other cities of the oblast.

Local Radio Broadcasts

Moscow VOYENNYYE ZNANIYA in Russian No 9, Sep 80 signed to press 7 Aug 80 p 21

[P. Dozorin report: "How the Broadcasts Are Prepared"]

[Text] For the purpose of exchanging experience we have published several broadcasts which were prepared in conjunction with the civil defense staff and radio editorial office of the Moscow "Dinamo" Plant imeni S.M. Kirov (VOYENNYYE ZNANIYA Nos 5, 7 and 8, 1980). These include a talk, a report from a drill and a sketch.

The genres are not limited to these, of course. Civil defense staff workers, nonmilitarized formation commanders and service specialists often appear in the studio. Civil defense activists' roundtable talks and interviews are broadcast.

How are the broadcasts prepared?

We would mention first of all that they are incorporated in a special section of the plan of party-political work with respect to the fulfillment of basic civil defense measures and civil defense propaganda confirmed by the installation's party committee. Every year the staff and radio editorial office work out the subject matter of the broadcasts and their brief contents. This enables us subsequently to prepare the scripts of the broadcasts in planned and skilled fashion and without undue haste.

Particular attention is paid to socialist competition and the propaganda of progressive experience. This was why plans were made to record the account of V. Skvortsov (chief production engineer's department), leader of a training group, on how he conducted a practical drill on the subject: "Adults' Reponsibility for Protecting Children From Weapons of Mass Destruction." The editoral office succeeded together with the staff in making this broadcast one of the best. Very many people heard it, including the leaders of training groups who have to conduct the same drills.

The course of socialist competition is reflected in radio bulletins which systematically describe the training standouts.

Physician Ye. Shershova--chief trainer of the voluntary aid detachment members at the installation--participates actively in the preparation of broadcasts on medical themes. She recently delivered the following talk on radio: "How To Prevent Infectious Diseases."

Of course, the final working up of the material is the business of Editor L. Shaparova. She was formerly the political officer of a voluntary aid detachment. So she knows about civil defense and prepares broadcasts on these topics with great interest.

"Comrade Shaparova requires us to set out our ideas simply," I. Goryachev, assistant director for civil defense, says, "not to abuse terminology and to explain to the listeners what this means. She is constantly repeating: people must not be frightened but must have the essence of the matter explained to them. And she is right here. We try to take all her remarks into account."

Each broadcast is preliminarily discussed and then heard through in the finished recording. This helps us remove the defects in good time. It should be mentioned that all the broadcasts have the civil defense staff callsign and have a musical arrangement. This, of course, immediately catches the listeners' attention.

I believe that the "Dinamo" people's experience would be useful for the radio studios of other industrial installations also.

In Kulyabskaya Oblast

Moscow VOYENNYE ZNANIYA in Russian No 9, Sep 80 signed to press 7 Aug 80 p 21

[Report by K. Odinayev, chief of staff of Parkharskiy Rayon, on civil defense exercise]

[Text] Kulyabskaya Oblast, Tajik SSR--"To the vehicles!" the command rang out.

The nonmilitarized civil defense formations of the "Tajsel'khoztekhnika" Parkharskoye Rayon Division boarded the motor vehicles in organized manner. The convoy soon reached the highway leading to the "center of damage." This episode is shown in the photograph.

During the comprehensive installation exercise all the formations successfully performed their set assignments. The reconnaissance group commanded by Sh. Muminov, the fire-extinguishing division (commanded by A. Komolov), the communications section (commanded by Yu. Karakulov) and the voluntary aid detachment workers under the leadership of Z. Kryshnevskaya operated particularly well at the exercise.

Brochure on Protective Equipment

Moscow VOYENNYYE ZNANIYA in Russian No 9, Sep 80 signed to press 7 Aug 80 p 21

[V. Mironov review: "The Simplest Means of Protection"]

[Text] This is the title of a recently published brochure by A.A. Chugasov.* The author examines the simplest means of protecting the population against weapons of mass destruction recommended in the civil defense system, emphasizing the idea that no methods and means suitable for people's protection can be ignored under particular conditions. After all, it could happen in practice that a certain section of the population will not be able to take advantage in good time of the shelters and radiation-protection refuges and the personal protective gear produced by industry. What will be needed in these circumstances will be an ability to rapidly construct or prepare the simplest means of protection and to use them as being the most accessible and flexible.

The brochure's first section describes the procedure for adapting as shelters basements, cellars, vaults, vegetable repositories and other sunken installations and residential, public and industrial buildings and of the construction of slit trench-type shelters. The use of simplified means of purifying the air in such shelters is also dealt with here.

The next section discloses methods of making the simplest means of protection of the respiratory organs--dust-protection cloth masks and cotton-gauze and other types of bandages--and particular aspects of making clothing and footwear as means of protecting the skin and the procedure of their use.

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*Voyenizdat, 1980 100,000 copies, pp 64, 10 kopecks.

One of the brochure's merits is the fact that it reflects measures to be carried out by the population to protect animals, food products, forage and water.

The brochure contains cleverly chosen drawings and diagrams and the pattern for a dust-protection cloth mask. It will undoubtedly help the population master the methods of the construction and preparation of the simplest means of protection and, together with the instructions "Everyone Should Know and Be Capable of This," will be a good training aid in independent civil defense preparation.

First Aid Training

Moscow VOYENNYYE ZNANIYA in Russian No 9, Sep 80 signed to press 7 Aug 80 pp 22-23

[Article by V. Zemitan, senior lecturer of the Kiev State Institute of Advanced Training for Physicians: "Impromptu Exercise Settings in the Drills"]

[Text] ...Three hundred people stood close by, and no one could help! All were powerless, although a young boy was dying before their very eyes. This was terrible.... The silence was piercing, as if everyone here was holding his breath. Three hundred pairs of eyes looked in stupefaction toward the stage, where a young men (a member of the audience, apparently) was attempting to administer to a variety artiste (who had been electrocuted by a faulty microphone) first aid by the Sylvester method: the hands moving up-down, up-down. But under these circumstances this method was completely powerless....

This incident, which nearly ended tragically, was described in the papers. Unfortunately, situations similar or close to this are not that rare, and they testify to the population's inadequate training in the immediate administering of first aid.

Gaps in theoretical instruction are reflected primarily. In the adduced incident they were manifested in an inability to select the necessary method of first aid. Instead of immediately embarking on direct cardiac massage and "mouth-to-mouth" artificial respiration, the insufficiently effective Sylvester method of artificial respiration was applied.

The confusion, indecisiveness and, at times, passivity of the bystanders in acute situations requiring immediate intervention could also (and, probably, primarily) be explained by a lack of firm practical skills in the administering of first aid, particularly in performing the simplest resuscitation methods. And this shortcoming can only be overcome through systematic and persistent practice.

The psychological readiness of each person for immediately administering first aid to casualties and his ability to rapidly surmount the negative emotional tension, fright and, sometimes, dread which virtually inevitably arise at the sight of a severe injury, particularly a sudden one, are also of considerable importance.

Experience has shown that good theoretical and even practical training is still not sufficient for molding in the population a constant readiness for immediately administering first aid. What is needed is a method of instruction which would bring the conditions of the drills as close as possible to a real situation.

In a real situation the need for first aid arises suddenly: a highway-transport incident, an accident, a natural disaster (earthquake, catastropic flooding, mud slide, landslide and others). The same may be said of sudden mass damage in wartime.

The method of solving impromptu exercise settings helps prepare people to rapidly surmount the negative reactions which appear at the time of sudden damage. The essence consists of the drill leader placing the instructees in surprise conditions and requiring them to immediately and independently select the method and means of administering first aid suitable for the damage. Conditions close to real conditions and damage whereupon the time available for timely first aid is as short as can be (clinical death, arterial hemorrhaging, tongue retraction and so forth) are selected for the impromptu exercise setting.

The customary practical drill (practice, fulfillment of a norm) begins, as a rule, with the announcement of the theme or training question and is provided with the necessary training aids. The instructees are thereby prepared in advance for strictly defined work, that is, are placed in ideal conditions. At a drill with impromptu exercise settings the method of first aid and the necessary available means for performing it are chosen without preliminary preparation, precisely as is the case in a real situation.

The impromptu exercise settings may be given at the start of the drill, prior to the announcement of the theme. This markedly increases the instructees' interest in the new material. For example, before studying methods of stopping arterial hemorrhaging it is advisable to give out the impromptu exercise setting per the given theme. A discrepancy will inevitably be revealed here between the knowledge and skills available for the accomplishment of the given practical assignment and those that are necessary. The need to broaden and deepen them serves as a strong mobilizing stimulus for the instructees.

The solution of impromptu exercise settings may also be practiced in the middle and at the end of a drill and when working up training questions both close to and more removed from the theme. Thus an impromptu exercise setting involving indirect cardiac massage is entirely permissible in a study of the singularities of the home care of infectious patients.

We pay particular attention in the selection of impromptu exercise settings to the methods of stopping external arterial hemorrhaging. After all, the time available for timely first aid with this type of injury is as short as can be, and it is not fortuitous that hemorrhaging which is not stopped in time is the primary cause of death when injuries occur.

Here is a proposed exercise setting: "Attention! Self-help assignment. Everyone works! Upon the collapse of the building caused by a nuclear explosion, a fragment of brick has injured the middle third of the left forearm. A throbbing fountain of bright red blood is spurting from the wound. Perform first aid on yourself!"

To master methods of mutual assistance theinstructees are distributed in pairs. Then the command is given: "Attention! The odd numbers work. In the center of nuclear damage your neighbor's (even numbers) heart has stopped following heavy hemorrhaging from a wound in the lower third of the right thigh. Help your comrade!"

And yet another exercise setting: "Attention! The even numbers work. The injured person (the odd numbers) is unconscious. He has an open fracture of the lower cranium, aggravated breathing and cyanosis. Help him!"

All the instructees should be included in the work as far as possible. They may operate simultaneously (in administering self-help) or alternately in pairs (mutual assistance). The work is evaluated with regard for the time from the moment the exercise setting is given to the start of aid being administered (measured by chronometer) and also the time spent directly on administering the aid.

The solution of the impromptu exercise setting culminates in an analysis. The leader emphasizes the instructional and educational purpose of the impromptu exercise setting, notes the positive aspects and shortcomings in the instructees' actions, reports the results of the time study and draws attention to the need to operate correctly and swiftly. At the end of the analysis he gives advice on how to eliminate the deficiencies in the work which were revealed.

The proposed method is highly effective in checking out abilities and skills in individual questions of the training program. It can be practiced during preparation for tests and even after a test if it is discovered that in fulfilling an assignment the instructees have not completed it within the prescribed time. They learn how to intelligently apply here the knowledge and skills they have acquired in the shortest time possible and practice the selection of the correct method of administering first aid.

Recently we have been practicing the solution of impromptu exercise settings in instruction not only in the methods of administering first aid but also in the procedures of initial medical screening. Experience shows that they also yield good results in the study of nonmedical subjects of the civil defense program and also at exercises.

The skillful application of impromptu exercise settings introduces an emotional intensity in the training process, which contributes to the better assimilation of the material. Important moral and psychological qualities are molded in the instructees upon the successful accomplishment of assignments: a capacity for rapidly getting one's bearings in and reacting to a situation, a belief in one's own resources, decisiveness, ingenuity and imagination and an endeavor to constantly pefect one's knowledge, abilities and skills. This is reason to consider this method highly effective from an educative viewpoint also. Thus it enables the problems of instruction and education to be solved comprehensively and makes it possible to considerably galvanize the instructees and inculcate a great interest in the drills, which is positively reflected in the quality of the entire training of the population in civil defense.

From the editors: in the first issue of 1980 A. Kostrov's notes "Closer to Reality" initiated a discussion on an improvement in the forms and methods of civil defense training and their creative application and on a need to avoid stereotypes, oversimplification and excessive hypothesizing in the drills. The readers responded readily to the editorial office's request to methods experts and drill leaders and military commanders and VUZ lecturers that they share their experience and describe successful procedures and the most typical mistakes in teaching civil defense. Issue No 8 for 1980 carried an article by N. Leonov from Ussuriysk entitled "How To

Galvanzie the Students." The above article by V. Zemitan continues this theme. His proposed method of impromptu exercise settings is applicable in drills not only for medical but also other subjects of theprogram. And, of course, it is advisable to utilize it extensively in training medical formations. The editorial office intends to continue the discussion of questions of a further improvement in civil defense training and awaits new information from its readers.

In the City of Leningrad

Moscow VOYENNYYE ZNANIYA in Russian No 9, Sep 80 signed to press 7 Aug 80 p 23

[Report by M. Katsenel'son, chief of civil defense staff of a construction trust: "Officers' Training Exercises"]

[Text] Leningrad--In instructing the commanders of nonmilitarized formations we have also made officers' training exercises part of our armament in addition to practical drills. This method of commander training, if it is skillfully and correctly applied, produces good results.

We usually organize these exercises prior to the specialist arm tactical drills provided for by the formation-instruction program or on the eve of specialist arm tactical and comprehensive installation exercises. The purpose of each exercise is to teach the commanders of the teams, groups and sections the procedure of working up the ways and methods of performing rescue and emergency-restoration work in the process of instruction of the personnel of all formations.

We make extensive use of incidental placards and incidental slides in order for the officers' training exercise to yield the greatest benefits and to some extent bring the instructees closer to real conditions in addition to the assignments in accordance with which they independently plot the situation on the plan or diagram of the installation and adopt decisions on the performance of this specific assignment or the other.

The incidental placard represents a frame copied from a placard issued by Voyenizdat essential for working up this training question or the other: for example, arranging a way through an obstruction, digging free and uncovering a buried protective installation, reinforcing or demolishing structures threatening to collapse and others.

The incidental slide is a transparency prepared on film from the same placard which is shown on a screen with the aid of a "Svityaz'avto" projector. Their application increases the clearness of the situation being demonstrated and heightens the psychological atmosphere.

In addition, in the premises where we conduct drills by the officers' training exercise method we hang, as a rule, tables containing reference data on the technical possibilities of crane trucks, excavators, bulldozers, pneumatic instruments and other equipment. In order that the instructees might independently determine the amount of the radiation dose the readings of the radioactive contamination monitoring instruments (the DKP-50-A dosimeter, for example) are demonstrated in the course of the drill with the help of the incidental posters and slides.

What is the form of the officers' training exercise?

In accordance with the theme of the drill and the training questions, the leader chooses the incidental posters and slides which he needs. He then checks how the instructees have performed the assignment and plotted the situation on the plan (diagram) of the installation.

An incidental poster or slide is shown at this time portraying the damage in the city. The instructees report the situation and their decisions with respect to arranging ways through the obstacles, indicating their parameters, the need for mechanization facilities and the procedure of their commitment to the scene of operations.

Other training questions are worked up in the same procedure, and the incidental posters and slides are changed accordingly. The situation is made more complicated by the issuing of exercise settings.

The method of officers' training exercises has justified itself in the course of commander training at our installation. It has increased considerably the instructees' interest in the solution of various problems connected with the organization of rescue and emergency-restoration work in the centers of damage.

Radiac and Chemical Monitoring

Moscow VOYENNYYE ZNANIYA in Russian No 9, Sep 80 signed to press 7 Aug 80 pp 24-25

[Article by M. Maksimov and B. Rykunov: "Radiac and Chemical Monitoring"]

[Text] In the event of an enemy's use of nuclear and chemical weapons and also upon damage to installations containing toxic substances the personnel of civil defense's nonmilitarized formations, workers, employees and the remainder of the population and equipment, installations, food, water and other physical resources will be exposed to ionizing radiation and radioactive and chemical contamination. If measures of monitoring and protection against these types of weapon are not adopted in good time, there could be unjustified losses.

Even in peaceful conditions the radiac monitoring of the exposure of people working with sources of ionizing radiation, at nuclear power installations also, is performed constantly. The civil defense staffs and services of industrial installations and formation commanders teach the personnel how to organize and perform this type of monitoring. However, given the formation of vast zones of radioactive and chemical contamination, the radiac monitoring of the radiation alone will be manifestly insufficient. This is why managerial and command and supervisory personnel must master practical skills in organizing and performing all kinds of radiac and chemical monitoring.

The main purpose of radiac monitoring is to insure timely protection and to obtain the necessary data for an evaluation of the fitness for work of the civil defense formations and workers and employees at installations of the economy under the conditions of the effects of ionizing radiation. Chemical monitoring, on the other hand, is performed for the purpose of establishing the incidence and extent of contamination of objects of the environment (the air, foodstuffs, water, equipment, terrain and so forth) and determining the possibility of acting without protective gear and the volume of special processing.

Radiac and chemical monitoring--an integral part of the population's protection against radiation and chemical agents--represents a complex of organizational and technical measures. It includes the timely provision of civil defense formation personnel and workers and employees with technical monitoring facilities and their maintenance in good working order; determination and calculation of the doses of radiation; and determination of the extent of the contamination of people, equipment, installations, foodstuffs, water and other physical resources with radioactive, poisonous and strong toxic substances.

In developing these steps in advance it is necessary to consider that people will be forced to live, work and perform rescue and emergency-restoration work on contaminated territory.

In accordance with the data of radiac and chemical monitoring, the civil defense services and formation commanders have to evaluate the fitness for work of the personnel and also the workers and employees on the job. On the basis of this evaluation decisions are made on the use of civil defense formations for performing rescue and emergency-restoration work or organizing the production process. The mode of the protection against radiation of people in the zones of radioactive contamination is specified in accordance with these same data.

Radiac and chemical monitoring is organized by the chiefs of staff and services of installations of the economy and the commanders of the nonmilitarized formations and it is directed by the chief of civil defense of the installation. Practical skills in organizing and performing this monitoring are acquired at specialist and tactical, command staff and comprehensive installation exercises. It is very important here that account be taken of the time factor for the collection and processing of data in order to swiftly adopt effective measures for people's protection.

Radiac monitoring includes the ascertainment of irradiation and radioactive contamination. Radiation monitoring is undertaken to obtain data in good time on the absorbed doses of radiation of the formation personnel and the workers and employees at an installation or in the region of their location. The incidence of the external effect of ionizing radiation is established or confirmed, people's fitness for work is evaluated and radiation casualties for their subsequent treatment in medical establishments are specified (determined) in accordance with its data.

This monitoring is subdivided into group and individual. Group monitoring is exercised per formation and shop (brigade) for obtaining information on the average doses of radiation for an evaluation and determination of the fitness for work categories. The ID-1 service dose meters or DKP-50A dosimeters are allocated thus: one per section; and one-two per group of people numbering 14-20 persons and also per protective civil defense installation. In the absence of such technical facilities the doses of radiation may be determined by the calculation method (in accordance with the levels of radiation and the time of exposure).

Individual monitoring is undertaken to obtain data on the doses of irradiation of each person. They are essential for an initial diagnosis of the degree of severity of radiation sickness. In this case the formation personnel and the installation workers and employees are issued individual ID-11 dose meters. This monitoring is also performed in the medical establishments, where readings of the incoming patients' doses of irradiation are taken with metering devices.

The monitoring is performed continuously if people are on terrain contaminated by radioactive substances. And after their exposure to gamma and neutron radiation (penetrating radiation) at the time of a nuclear explosion, the read-out from the service dose meters is performed immediately. In order to evaluate people's fitness for work it is necessary to know how the doses of irradiation are computed. This computation as per the readings of the service dose meters (dosimeters) must be made: in a team and group, of the entire personnel; in a detachment, of the personnel of the headquarters of the detachment and all team (group) commanders; and in the staff of an installation's civil defense, of the entire managerial body of the installation, the personnel of the staff and the detachment, team and individual group commanders. The doses are recorded incrementally in the irradiation-monitoring log. Periodically the total irradiation dose is also entered on a record card. Each participant should have such at exercises.

A marked reduction in or loss of fitness for work is detected in everyone who has received a dose of irradiation above the permissible norms. What is understood by fitness for work here is the possibility of performing one's professional duties for a certain length of time after external irradiation.

The evaluation of the fitness for work of the civil defense formations, workers and employees and shifts or production brigades is made by the commanders and corresponding chiefs. Readings are taken from the service dose meters (dosimeters) for this or the doses are determined by the calculation method with regard for analogous conditions of people's actions in the period of exposure. Then, finding the average dose of irradiation, the fitness for work categories are determined. An individual evaluation of the fitness for work of the managerial and command and supervisory personnel and of persons operating away from the installation is made in the same way.

Each formation commander evaluates the fitness for work of his formation and the subunits within it at one level lower. Let us explain this with an example. The commander of a reconnaissance group has received the assignment of carrying out the radiation reconnaissance of three routes for the performance of rescue and emergency-restoration work at installation "K." Each route was worked by a section with ID-1 service dose meters. The section commanders reported: the personnel of the first section received a dose of 60 R, the second 120 R and the third 40 R. To evaluate the fitness for work category of the reconnaissance group we find the average irradiation:

$$D = (60 + 120 + 40) : 3 = 73 \text{ R}$$

And now we determine: fitness for work is preserved. However, it should be taken into account that the personnel's fitness for work categories are specified only by the medical service with regard for the nature of the irradiation and the manifestation of the initial reaction of the person who has been exposed to the radiation, on the basis of which a conclusion is drawn as to the possibility of the subunit's fulfillment of a further assignment.

In accordance with subordination, the formation commanders report or submit accounts by a certain time which communicate the following: team (group) commanders, data on the doses of irradiation of their personnel; and detachment commanders, on the fitness for work of each team (group) and the doses of irradiation of the team (group) commanders.

Radioactive contamination is monitored to determine the extent of the contamination of people, equipment, transport and installations by gamma radiation with DP-5-type instruments or, for the relative activity of radioactive substance in food products, water and so forth by beta- and alpha-radiation, with DP-100-type radiation-counting scalers and other devices available at the installation. It is performed, as a rule, after the formations' fulfillment of their assignments in the centers of nuclear damage and in the course of production activity or the fulfillment of other civil defense measures in the zones of radioactive contamination.

Radioactive contamination is monitored at special processing posts (PUSO), clothing decontamination stations (SOO) and equipment decontamination stations (SOT) and also by the installation's chemical and radiometric laboratories.

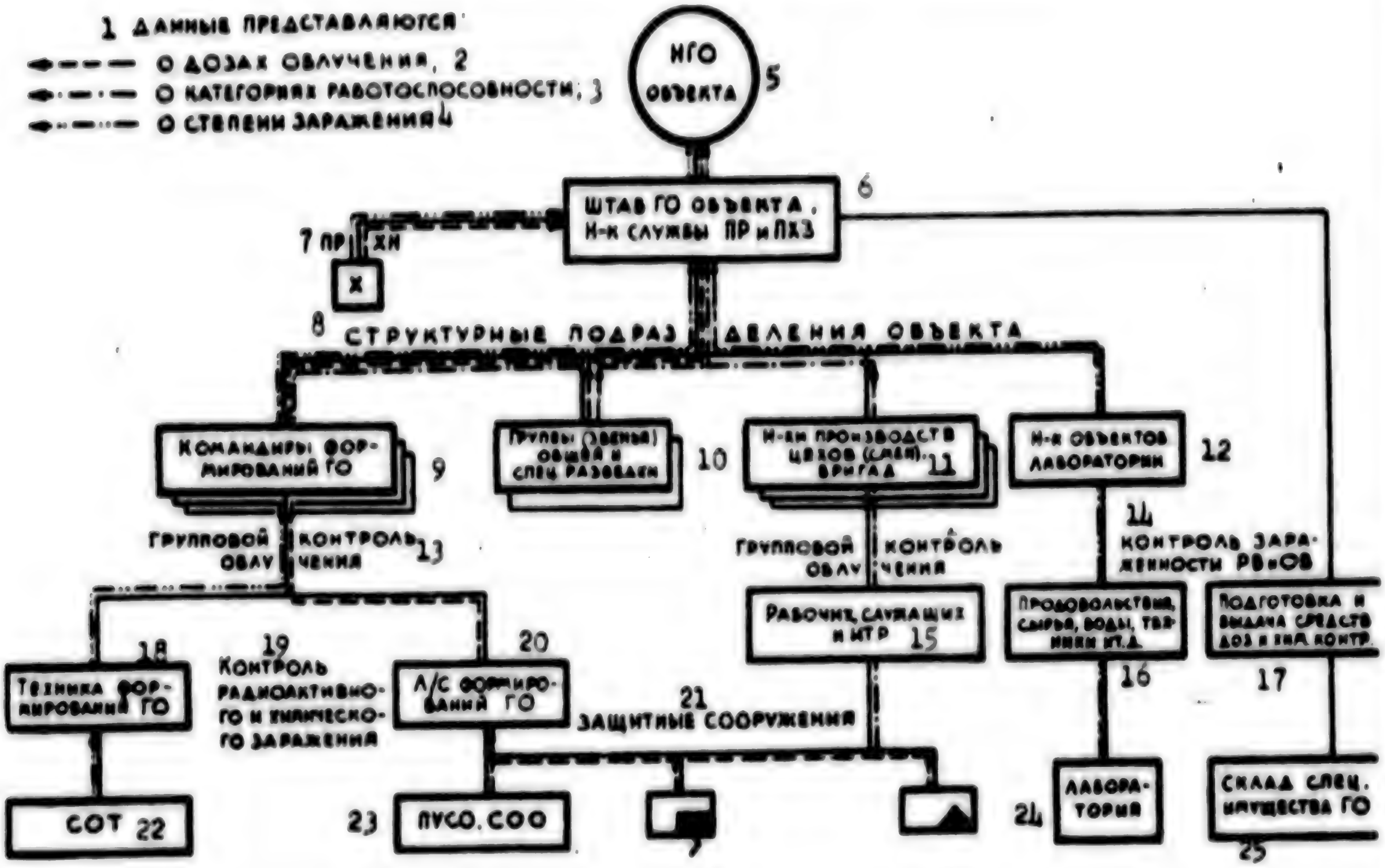
In accordance with subordination, data is simultaneously submitted on the monitoring of radioactive contamination: the number of contaminated people and also the quantity of equipment, transport, individual protective gear, clothing and other items and the volume of special operations being performed.

Chemical monitoring is undertaken with chemical warfare reconnaissance instruments (VPKhR, PKhR-MV, PPKhR and others) and also by installation and field chemical laboratories (PKhL-54). The presence of war gas is established with the aid of instruments, and the laboratories give their quantitative computations, primarily in food products and water. For this the civil defense staffs and services and also the formation commanders take samples in the course of special reconnaissance which are delivered to the laboratory.

Chemical contamination is monitored immediately after the enemy's use of war gas or the effects of strong toxic substances and at the time of rescue and emergency-restoration work, after an appearance at the PUSO, SOO and SOT thanks to the forces and resources of the civil defense formations.

Radiac and chemical monitoring which is organized in good time and correctly carried out (see diagram) will help to insure preservation of people's vital activity and fitness for work. In this sense it should be regarded as an element of an increase in the operating stability of an installation of the economy under the conditions of radioactive and chemical contamination.

Model Diagram of the Organization of Radiac and Chemical Monitoring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Х
8 СТРУКТУРНЫЕ ПОДРАЗДЕЛЕНИЯ ОБЪЕКТА
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Key: 1. Data submitted 2. On irradiation doses 3. On fitness for work categories 4. On extent of contamination 5. Installation civil defense chief 6. Installation civil defense staff, protection against radiation and chemical agent service chief 7. Radiation and chemical observation post 8. Structural subdivisions of the installation 9. Civil defense formation commanders 10. General and special reconnaissance groups (sections) 11. Works, shop (shift) and brigade chiefs 12. Services, laboratory chief 13. Group irradiation monitoring 14. Radioactive substance and gas warfare contamination monitoring 15. Workers, employees and engineering-technical personnel 16. Foodstuffs, raw material, water, equipment and so forth 17. Preparation and issue of radiac and chemical monitoring facilities 18. Civil defense formation equipment 19. Radioactive and chemical contamination monitoring 20. Civil defense formation personnel 21. Protective installations 22. Equipment decontamination post 23. Special processing post, clothing decontamination post 24. Laboratory 25. Civil defense special property storehouse.

Instructor Training

Moscow VOYENNYYE ZNANIYA in Russian No 9, Sep 80 signed to press 7 Aug 80 p 26

[Article by N. Kondratenko, specialist in educational methods of the Khmenl'nitskaya Oblast Teacher Advanced-Training Institute: "Alongside the Teacher the Methods Specialist"]

[Text] Civil defense drills are conducted in the schools, as is known, in the second and fifth grades. They are also assigned a considerable place in the ninth grade, in the program of basic military training.

The demands made on the teaching of civil defense in the school have increased noticeably in recent years, in connection with which the tasks confronting the teaching collectives have become more complicated. In order to accomplish them successfully it is necessary to improve the quality not only of the drills but also of the extramural civil defense measures conducted with the students. The question arises in this connection of both the teachers and heads of the schools being given methods assistance.

Support schools are intended to be methods centers of a kind. But the creation of such schools is, we believe, only part of the problem. It is also necessary to train nonstaff civil defense methods specialists among the best trained military instructors. The experience of Khmel'nitskaya Oblast testifies that this is a promising business.

The Khmel'nitskaya Oblast Teacher Advanced-Training Institute has already trained a group of such methods specialists (one-two-persons from each rayon and city) at 2-week courses. The participants in the courses were addressed by M. Vesnyy, head of the Khmel'nitskiy Obkom Lecturer Group, V. Shaynoga, head of the oblast Public Department, V. Rychkov, lecturer-reviewer of the Khmel'nitskiy city "Znaniye" Society organization, and skilled lecturer-methods specialists.

Ye. Kalashnikov, military instructor of Khmel'nitskiy's High School No 8, shared his experience of work. Using the example of one drill, he demonstrated the procedural methods of the use of technical means of instruction and visual aids for civil defense. He gave the future nonstaff methods specialists useful advice on the procedure of conducting additional drills and competitions in the school and civil defense measures in the pioneer camp.

The work experience of A. Smirnov, military instructor of Khmel'nitskiy's High School No 17, was thoroughly studied as preparation for the nonstaff methods specialist courses. The methods aid "The Standard Lesson" and the poster "High Quality at Each Lesson" resulted from this study. A discussion of the methods aid, attendance at a lesson given by A. Smirnov and a subsequent talk with him helped the students clarify a good deal and penetrate the secrets of teaching skill.

The future methods specialists attended practical drills and training sessions and familiarized themselves with the modern civil defense training aids supply in the school. A survey of methods literature and visual aids related to civil defense was prepared for them. In a word, everything was done to broaden the lecturers' outlook and arm them with the necessary knowledge.

We can as yet speak only of the first results of the work that has been done, but they are sufficiently impressive. Thus in Vin'kovetskiy Rayon, where F. Durach, military instructor of Vin'kovetskaya High School, is the nonstaff methods specialist, at the time of the last check the state of student civil defense training was assessed as good in an absolute majority of schools. A. Vashchuk, nonstaff methods specialist of Teofipol'skiy Rayon, has also performed a great deal of work in a comparatively short time. I. Rasshchupkin is working enterprisingly and with good results in Kamenets-Podol'skiy.

The activity of S. Tyshkevich, military instructor of Khmel'nitskiy's High School No 16, nonstaff civil defense methods specialist, was evaluated highly by the Ukrainian SSR Ministry of Education. Following coordination with the public education authorities, he conducted for the military instructors of the city's schools instructional-procedural drills in several topics of the program, during which methods of completing civil defense standards and the procedure of application of technical means of instruction at the drills were also shown.

Khmel'nitskiy's High School No 8 also has a good reputation. A civil defense study room has been excellently equipped here, civil defense drills in the second, fifth and ninth grades are conducted on a good methodological level and interesting and instructive extramural measures are implemented.

"A large proportion of the work of our military instructor Yevgeniy Nikolayevich Kalashnikov is contained in all this," Svetlana Petrovna Dzyavoruk, director of the school, said. "It is good when such an experienced nonstaff methods specialist operates alongside the teacher."

"However," Yevgeniy Nikolayevich joined the conversation, "without the help of the school's leaders and the entire teaching collective my efforts alone would hardly have been enough for us to have achieved such results."

And, indeed, the example of this and other schools convincingly shows that the biggest successes in training the students in civil defense are scored where the military instructor displays initiative and creativeness and the school's director and the teaching collective support his efforts in every possible way.

How did Comrade Kalashnikov begin, for example? With the creation of a supply of training equipment. And now the school has not only a military study area but also a civil defense study area, in which everything necessary for conducting the drills is concentrated. There is also a radiation-protection shelter. It is clear that it would be beyond the capabilities of just one teacher to cope with such a task alone.

The military instructor constantly perceives the support of the school's leaders and party organization. But he also, in turn, understands that the trust that is shown has to be justified and performs the duties of nonstaff methods specialist with a sense of high responsibility. On the eve of the new training year Yevgeniy Nikolayevich is organizing a 1-day seminar for teachers who will have to perform civil defense drills. Shortcomings will be analyzed particularly carefully and their causes revealed here, and a skilled evaulation of procedural methods which have justified themselves will be made. There will be a frank exchange of opinions at the seminar, and the teachers will share their experience of conducting lessons and organizing extramural work with the students on civil defense. Instructional methods drills will be conducted on the most important topics. In addition, Yevgeniy Nikolayevich will give personal tuition to the teachers before each drill.

Other examples could also be cited testifying to the effectiveness of the activity of the nonstaff methods specialists. It is gratifying that the ranks of teachers successfully teaching civil defense are being replenished thanks to their active support and assistance. Some of them go on to become skillful methods specialists themselves.

A little more than a year has elapsed since the time of the first "graduation" of nonstaff methods specialists. A short time, of course. But we have been convinced in this time that the work that has been done has not been in vain and that it must be continued. We plan in the future to conduct special seminars on questions of a further improvement in the procedure of the drills with students and teachers and to organize the activity of support schools. It is also proposed to institute the regular exchange of the work experience of the nonstaff methods specialists, which will enable us to introduce the most effective teaching methods on a current basis.

Book Review

Moscow VOYENNYYE ZNANIYA in Russian No 9, Sep 80 signed to press 7 Aug 80 p 27

[G. Prikazchikova review: "New Training Aid"]

[Text] The small library of methods literature on civil defense has been supplemented by a new publication. The training methods aid "Meropriyatiya po grazhdanskoy oborone v pionerskom lagere"* [Civil Defense Measures in the Pioneer Camp], the author of which is S.M. Semenov, has been published.

Concern for the younger generation, particularly its protection against weapons of mass destruction, is a most important duty of the country's adult population. In order to teach children to take advantage of means of protection against modern weapons civil defense is being taught in the school. Various forms of outdoor and extramural work on fulfilling civil defense standards are practiced extensively. These are primarily the "Zarnitsa" all-union military sports game and the measures conducted in the summer in the pioneer and other health camps. And it is good that the aid deals in comparative detail with the documents regulating this work and the principles of its organization and material support.

Of all the measures conducted in the pioneer camps, the author highlights the most prevalent--quiz games, competitions, militarized marches and military sports games. Describing the quiz game, he does not overlook such of its forms as the radio quiz and the "auction." He also illustrates in detail the methods of training and the procedure of passing the standards of the "Ready for Labor and Defense of the USSR" complex. Analyzing the forms of civil defense work in the pioneer camp, he emphasizes the need for strict observance of safety measures and makes certain practical recommendations in this connection.

An appendix in the aid adduces a model list of questions and answers for a quiz game, a table of the pioneer camps' equipment with civil defense items (a version), a plan for conducting a military sports game and an estimate of the physical resources and simulators to provide for it. At the end there is a list of recommended literature, placards and films and slides.

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*Izdatel'stvo DOSAAF, 1980, pp 80, 75,000 copies, 10 kopecks.

The new training methods aid is addressed primarily to the workers of the pioneer camps and also the lecturers and industrial-training experts of civil defense courses who are engaged in their training in accordance with the corresponding program. It will also be useful to teachers, class leaders, military instructors and young pioneer leaders--all those who are connected with the implementation of civil defense measures in the school.

The aid does not claim an exhaustive exposition of the question and contains only basic information on the organization and methods of conducting civil defense measures. As the author emphasizes, "each worker of civil defense, the pioneer camp and Komsomol and other organizations is obliged to perfect the forms and methods of the training of pioneers and schoolchildren for protection against weapons of mass destruction."

The recommendations made in the aid cannot be regarded as something permanent and given once and for all. This applies, in particular, to the questions of the quiz proposed by the author. He has formulated them in traditional, examination-type form. But there could also be others aimed not only at testing the boys' knowledge but also their imagination.

In organizing such civil defense measures in the pioneer camp or the school it must be remembered that these are not only training but also a form of leisure. And as such, it should be interesting and appealing to the children. It is not fortuitous that a dynamic, truly sports measure--the relay-race competition--enjoys great popularity. When the physical load is measured out skillfully, it can be conducted with children of any school age, starting in the second grade.

The experience of the work of the best pioneer camps and schools indicates that it is necessary to not only arm ourselves with everything that has already been tested in practice but also to seek out new forms, having recourse to copying methods employed in work with adults. And it is necessary to unfailingly take account of the age of the children and the particular features of the perception and store of knowledge. Work with children does not tolerate hackneyed models. This is what the training methods aid in question also tells us.

In Donetskaya Oblast

Moscow VOYENNYYE ZNANIYA in Russian No 9, Sep 80 signed to press 7 Aug 80 p 27

[Report of industrial-training expert N. Beloshov]

[Text] In socialist competition in civil defense our Leninskiy Rayon has retained the Donetskiy Gorkom and Gorispolkom Challenge Red Banner for several years now.

Insofar as it is impossible to accomplish the tasks of instruction without a full-fledged supply of training equipment we exerted every effort to create such both at the courses and at installations of the economy. Much work was done here by the communists Ye. Turanskiy, P. Larin, A. Panteleyev, I. Lushnikov and others. The courses now have everything they need for high-quality civil defense instruction, including training areas where practical methods are practiced and standards passed. The training equipment of the civil defense course of Leninskiy Rayon invariably takes one of the leading places in the republic competitive review. Good training posts have been created at the Foundry imeni V.I. Lenin, the Machine-Building Plant imeni Leninskogo komsomola Ukrainy, the Refrigerator Plant and a number of other installations. Courses of civil defense leaders of Donetskaya Oblast's cities and rayons have been held repeatedly in our rayon.

All workers of the rayon courses are "Znaniye" Society members and belong to the civil defense section led by communist A. Panteleyev and frequently deliver lectures and give talks to the public.

Instructors' Questions Answered

Moscow VOYENNYYE ZNANIYA in Russian No 9, Sep 80 signed to press 7 Aug 80 p 28

[Replies to civil defense course workers' questions]

[Text] Question: What document regulates the new remuneration terms of civil defense course workers?

Answer: An order of the USSR Civil Defense chief regulating the minimum wage of workers and employees with a simultaneous increase in the wage rates and salary scales of the intermediate-level categories of civil defense staff, establishment and course workers took effect on the entire territory of the country on 1 December 1979.

Question: How is the difference in the wages of lecturers and industrial-training experts of civil defense courses explained?

Answer: By the difference in their entrusted duties and the specific features of the work. The rates (scales) of lecturers are paid on the basis of 3 hours of teaching per day (720 hours per year), and of industrial-training experts on the basis of 7 hours of daily work, that is, 41 hours per week.

Question: What is the length of the work day of the civil defense course lecturer and industrial-training expert?

Answer: For lecturers of courses of republics, krays, oblasts and the city of Moscow the length of the work day is determined by the teaching load and methods work in accordance with the overall plan of the courses. The work of the industrial-training expert is planned on the basis of the normal length of work time determined by the Fundamentals of USSR Labor Legislation and those of the union republics. No less than one-half of the time here should be taken up with work on the practical instruction of different categories of the population.

Question: Does the wage depend on the level of education?

Answer: For the lecturers the salaries for the post are determined depending on education and length of service. For example, for course lecturers with secondary education and work experience of less than 5 years a monthly salary of R80, but for those with higher education and more than 25 years of service a salary of R145.

Question: Do the "Instructions Concerning the Procedure of Computing the Wage of Pedagogical Workers" extend to civil defense course lecturers?

Answer: Yes, they do. The amounts of the wage here change thus: a) upon an increase in the length of service in teaching; b) in the event of conferment of the title of honored teacher; and c) upon acquiring an education or recovering education certificates.

Question: Is service in the Soviet Army as an officer in any branch of service counted in the length of service in teaching?

Answer: The time of service in the armed forces, including USSR MVD and KGB forces, and also in USSR KGB organs and the time spent in partisan detachments in the period of the Great Patriotic War (from 22 June 1941 through 9 May 1945, and, for participants in the war with Japan, through 3 September 1945) is counted in the length of service in teaching if service in the armed forces was immediately preceded and immediately followed by teaching activity.

Question: What is the procedure of paying bonuses to civil defense workers?

Answer: Civil defense, including course, workers are awarded bonuses by order of the appropriate supervisor as an incentive.

Question: What is the procedure of the payment of pensions to civil defense workers?

Answer: Pensions are paid to civil defense workers on a general basis in the procedure envisaged by Soviet legislation.

Question: Do all civil defense courses have the position of laboratory assistant, and what is the wage?

Answer: Not all. If the staff list provides for the corresponding position, a salary scale of R85-95 is established for the laboratory assistant.

Question: Is additional payment for a civil defense course autoclub projectionist authorized for his doubling up the position of driver?

Answer: If, given the vacant position of driver, the projectionist combines performance of his own immediate duties with those of the latter, he is paid an additional 30 percent of the base salary. The same for a driver for combining the duties of projectionist (given a corresponding vacant position).

Question: Who acts as head of the civil defense course teaching department if this position is not provided for on the list of staff?

Answer: A head of the teaching department is appointed only when provided for by the list of staff. In all other cases his duties are performed by the course supervisor.

Question: May course lecturers be enlisted at installations of the economy for work not connected with teaching activity? If so, how is this work remunerated?

Answer: The course lecturer's teaching load also includes participation in preparing and conducting instructional demonstrations with managerial and command and supervisory personnel and civil defense specialist arm tactical, command staff, comprehensive installation and other exercises conducted by senior civil defense supervisors (but no more than 70 hours per year). At the same time enlisting lecturers (as also industrial-training experts) for routine work in civil defense staffs is prohibited. In addition, the lecturers are obliged to study the work experience of the civil defense staffs and services and installations and formations and also the experience of organizing and conducting civil defense specialist arm tactical, command staff, comprehensive installation and other exercises and introduce everything positive in the teaching process. There is no provision for any additional pay for this work.

Question: May a course lecturer work simultaneously in another educational institution?

Answer: With the consent of the course supervisor the lecturer-employees are authorized to work pluralistically in the position of lecturer of another educational institution; the sum of the salaries here for the combined positions must not exceed 1.5 times the salary for the basic position.

Question: Are daily allowances authorized for industrial-training experts for travel to the courses?

Answer: Neither daily nor field allowances are paid to the said comrades. For the period of the courses their wages are held for them at their place of work, they are reimbursed the cost of travel to and from the training venue and they are also granted free lodging.

Question: Do newly enrolled civil defense course lecturers and industrial-training experts have to attend special courses?

Answer: All newly enrolled lecturers and industrial-training experts are only permitted to conduct drills following training in a special program at republic (kray, oblast) civil defense courses.

From the editors: judging from a number of letters to VOYENNYYE ZNANIYA, the documents regulating the activity of the courses and determining the rights and duties of lecturers and industrial-training experts are not always brought to the attention of the persons concerned. In accordance with the normative documents, the civil defense staff chiefs locally should evidently brief course workers, particularly those newly starting work, in good time.

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WARTIME OPERATIONS: ENGINEER OPERATIONS IN THE FAR EAST

Moscow ZNAMYA in Russian No 8, Aug 80, signed to press 11 Jul 80 pp 172-183

[Article by ColGen Engr Trps (Ret) A. Khrenov: "On the 35th Anniversary of the Kwantung Army's Defeat: 'And in the Pacific...'"]

[Text] In the East of our country, the land border, after abruptly bending to the north, circumscribes a quaint, twin-humped projection and again turns sharply to the south, descending to the ocean. To the left of the projection lies the Transbaykal; above, to the north, it is propped up by the Amur region; and, to the right, between the border and the Pacific coast, lies the Maritime region. Inside the projection lies part of China's northeastern territory, the part called Manchuria. In 1931, Japan seized this territory and a year later established the Manchukuo puppet government headed by Pu Yi, who was proclaimed emperor in 1934. In the southeast, the "empire" was bounded by Korea, a Japanese governor-generalship since 1910. Manchukuo also included the Liaodun Peninsula and its southwestern extremity--the Kwantung (in Chinese, Guandun) region.

It turned out that the Kwantung city of Port Arthur occupied the same sort of place in history as Sevastopol': its heroic defense in 1904 brought renewed glory to the Russian soldier's selfless military valor and determination. The Kwantung region itself gave its name to a savage, fierce force--the entire Japanese army of occupation in Northeastern China.

In the Far East, we were faced by an old, perfidious enemy. By treacherously attacking the Port Arthur Squadron's ships in 1904, Japan marked the beginning of the era of undeclared wars (incidentally, Pearl Harbor is an accurate historical parallel to Port Arthur!). In the same tradition of national cynicism, they carried out their attacks against the Soviet Union at Lake Khasan and against our friend Mongolia at Khalkhin-Gol River. The Kwantung Army, which was now designed for great conquests "to the Urals," had tested itself and had tested our strength. These were sobering lessons for the Japanese militarists but they perceived them in their own way: not to give up their aggression in the west but to prepare for it more thoroughly.

The Great Patriotic War had already come crashing down and the war was underway in the Pacific while the Kwantung Army was waiting for the most favorable time to seize the long-desired land of its neighbor with the least casualties. While waging a relentless struggle against Hitler's Germany and when each brigade and each regiment counted, we were forced to keep from 32 to 59 rated ground force divisons alone in the Far East. There was a neutrality pact between the USSR and Japan. But, could there be great faith in it when the Japanese Fleet in the Pacific was detaining and sinking our merchant vessels while, in 1944 alone, our land border was violated 144 times and our territory was fired upon 39 times! The Maritime Group of Forces, the Far Eastern Front and the Transbaykal Front were on guard.

After Stalingrad and Kursk, the Japanese militarists were not in a hurry to implement their aggressive plans against the USSR. Moreover, in order to contain the American and Allied advance, part of the Kwantung Army's formations had to be shifted to the southern seas. To make up for this on the Soviet border, the Japanese built a fortified defense system based on the last word in military equipment. Moreover, the quality of the Kwantung Army was changed. These were no longer the units that were defeated at Khasan and Khalkhin-Gol: almost all the men and officers had been schooled in combat in Oceania and Indochina.

But, what was this Kwantung Army just for whose neutralization we had to maintain such large forces?

The word "army" is not synonomous in our lexicon. In this case, in the case of the Kwantung army, it designated a major regional component of the country's armed forces--a strategic formation which, by the spring of 1945, included the 1st and 3rd Fronts, the 4th Independent Army, the 2nd Air Army and the Sungari Riverine Flotilla. Total force strength was approximately 750,000 men. In addition, the 17th Front and the 5th Air Army were deployed in Korea; they could be (and subsequently were) included in the Kwantung Army. Finally, Manchukuo had its own puppet forces. Overall, a force grouping numbering over a million men was deployed in Manchuria, Inner Mongolia and Korea.

The Allied Command knew very well that if the Kwantung Army--the nucleus of the enemy's land forces and their decisive fighting force--crossed over to the mother country and began a systematic defense of the Japanese Islands, then the end of World War II would stretch out for a long time. Therefore, at Teheran and Yalta, the Allies stubbornly tried to get the Soviet government's consent to the USSR's entry in the war against Japan. Of course, our country was also interested in swiftly mopping up the sinister seat of aggression and ceaseless military provocation; it had not forgotten its international duty: helping the Chinese and Korean people in their national liberation struggle.

These were the goals of the coming war. This was the enemy.

Naturally, to conduct offensive operations directed at a swift, decisive defeat of the enemy, the Supreme High Command planned to reinforce the forces in the Far East with troops toughened in the fighting in the West. Just as natural was the decision to strengthen the Front commands with generals skilled in directing large-scale offensive operations. Thus, Mar K. A. Meretskov, who had earned a reputation as a specialist in waging warfare in especially difficult natural environments, and his field headquarters were to be in charge of the Maritime Group of Forces. Command of the Transbaykal Front was taken over by Mar R. Ya. Malinovskiy. Only Gen of the Army M. A. Purkayev remained in charge of the Far East Front; he had assumed this position in 1943 and had commanded armies and a Front in the Western Theater of Operations prior to that.

And, finally, a major condition for success in the future campaign was secrecy in preparing for it, deceiving the enemy. This condition was not easily met: the problem consisted of transferring large numbers of troops and combat equipment across the country along the only main rail line.

Our train--the former Karelian Front's field headquarters and special unit--got underway on 31 March. We went to Moscow and circled it the entire night so the passengers could only guess what direction the train was heading in. Only beyond Kirov did we realize that our journey was to Siberia or the Far East. Incidentally, the train did not resemble a troop train very much: it looked like a completely normal express train. The destination was only known to a few people: the commander, his deputies and senior staff.

We were all well "camouflaged." Mar K. Meretskov was ColGen Maksimov; for the greater part of the trip, he did not wear his military uniform. The same kind of metamorphosis also took place with the other generals. I, for example, "was reduced" to lieutenant colonel and named Fedorov.

Gradually, we reached our location where we celebrated Victory Day. We did not go to sleep until morning so we could hear the red-letter salute which rang out in Moscow on the evening of 9 May on the radio. Meretskov flew to the capital to take part in the Victory Parade. He was in charge of a composite regimental column of the Karellian Front--the right-of-line Front was given the honor of opening the triumphant procession.

At local station tracks, I met the troops which were beginning to arrive for our Front (the Maritime Group was precisely a full-fledged front formation). I met the 5th Army which had victoriously ended the war in East Prussia. Secretly relocating an entire army from the West to the East is a great deal more difficult than redeploying a field headquarters and its attached units. But, this mission was also accomplished in an outstanding manner.

The trains with the men and the tarpaulin-covered equipment were travelling on a strict schedule; they rushed through large cities in the dark and did not stop at the stations. We immediately disperse the divisions to their prepared positions.

The same method was also used to reinforce the Transbaykal Front. We cannot say that the enemy did not notice anything. But, as we found out later, he had no idea of the scale of our preparations; he did not discover the deadline for our entry into the war. The strategic deception achieved its goal.

But, the fact that the Soviet Union would side with the Allies sooner or later was no secret to the Japanese.

In April, the neutrality pact between our country and Japan expired. The Soviet government refused to extend it--treachery was not our weapon even in our relations with a treacherous, aggressive neighbor.

June saw the establishment of the Soviet Far East High Command. The commander in chief was Mar A. M. Vasilevskiy, the War Council member was ColGen I. V. Shikin and the chief of staff was ColGen S. P. Ivanov. In July, after receiving Headquarters, Supreme High Command (Hq SHC)directives, we undertook detailed development of a strategic offensive operation which was titled the Manchurian Operation. The goal of the operation was to encircle the Kwantung Army by not giving it an opportunity to withdraw into the Chinese heartland, split it up into pieces and destroy it. I have already mentioned the forces at the disposal of this army. On our side, we enlisted the Transbaykal and Far East Fronts, the Maritime Group of Forces, the Mongolian People's Revolutionary Army, the Pacific Ocean Fleet and the Amur Naval Flotilla to participate in the operation. We had guaranteed a significant superiority over the enemy in men and equipment.

The concept of the operation involved delivering two main thrusts and several subsidiary attacks. The first main thrust from the Mongolian People's Republic to the southeast was delivered by the Transbaykal Front; the second thrust, meeting the first half way from the Maritime region, was delivered by us. Each of these thrusts took the form of an independent Front operation.

The one conducted by us later went down in military history as the Kharbin-Girin Operation.

On 5 August, an order arrived from the Hq SHC: the Maritime Group of Forces was retitled the 1st Far East Front and the Far East Front was retitled the 2nd Far East Front.

We took this as a signal: to be ready.

On 8 August the Soviet government declared that "as of tomorrow, that is, 9 August, the Soviet Union will consider itself at war with Japan...."

In the Far East, I was struck by nature's unbelieveable luxuriance and primordial scope: the majestic mountains, the wide, deep rivers, the mighty forest, the unusually thick trees and the vine-entwined liana. I had never seen anything like it at my home in the Urals or in the most exotic corners of European Russia.

But, then, we did not come here to enjoy the beauties of nature but to fight. And, this forced us to look at everything through the eyes of a military engineer. And, looking at it this way evoked feelings which were far from being rapturous. There was almost a 600 kilometer stretch of the national border in our Front's sector--from Guberovo Station in the north to the ocean shore in the south. This area brought together all the natural barriers (with the exception of the tundra, naturally) that I had dealt with in the Crimea, at Volkhov, in Kareilia and in the Arctic area. Moreover, it brought them together on a greatly enlarged scale. When there were, for example, swamps here, they were the kind that you could not cross or lay a corduroy road through.

In addition, the old timers predicted torrential flooding by the end of the summer, flooding during which the river floodlands would turn into continuous, large lakes. Fortunately, we made it through this year without severe floods.

While hastily building their fortified defense system here during the last two years, the Japanese did an outstanding job of taking terrain features into consideration. In the maritime sector, they built six strong fortified areas and they covered the few roads, mountain passes and passable defiles with centers of resistance and strongpoints. The reinforced defense in this sector was understandable: these were the shortest routes to Manchuria's vitally important centers.

The 1st Far East Front had sufficient forces at its disposal to break through the reinforced sectors, to develop the offensive throughout the entire depth anticipated by the operations plan and to defend the coast against assault landings: it contained the 1st Red Banner, the 5th, the 25th and the 35th Armies, the Chugevskaya Operations Group, the X Mechanized Corps and the 9th Air Army. Opposing us were the 3rd and 17th (Korean) Fronts which contained the 3rd, 5th, 34th and 58th Armies and the 5th Air Army. The enemy was inferior in manpower and equipment levels. From intelligence data, we knew that the Japanese Army did not have automatic weapons, anti-tank guns or rocket launchers and it did not have enough heavy artillery. But, we could not count on an easy victory. The majority of the soliders were ignorant, illiterate, indoctrinated in a spirit of fanatical devotion to the emperor and of hatred toward the Soviet Union and ready to fight to the last bullet. For example, the Kwantung Army contained a sucide brigade--soldiers whose mission was to throw themselves under tanks with explosives.

Nevertheless, our major difficulties were the fortified areas and natural barriers. We persistently racked our brains over how to negotiate these obstacles, bypass the fortified areas and straddle the roads. The forthcoming operation required a broad balance of all engineer functions. Scrupulous intelligence, laying roads through the impassable mountain tayga, attacking pillboxes and earth-and-timber emplacements, forced crossings of wide, swift rivers, building bridges, laying mines, sabotage operations in the rear, supplying water to the troops, clear-cut traffic regulation--you couldn't even list it all. The only thing we didn't anticipate was any special problems clearing mines: as we knew, mines were not widely developed in the Japanese Army.

Everything began with reconnaissance. I began to make trips to the border myself in April. Sometimes in a jeep, sometimes on foot--I wanted to get an idea of what the fighting man would experience fighting his way through here--I inspected the entire border in the front's sector.

But, naturally, this was my personal reconnaissance and it had virtually nothing in common with real engineer reconnaissance. The engineer reconnaissance was urgently required. By the time of our arrival, the Maritime Group's command element did not know enough about the cordoned sector--all the information was confined to visual border guard observations. Therefore, a military geological detachment was immediately put to work and aerial photography and photo interpretation got under way. At the end of May, small combat engineer reconnaissance groups began to penetrate deep into enemy territory. They were strictly prohibited from entering into contact with enemy border guard or army units and from opening fire. The most important thing was to obtain data on terrain characteristics and special features and on the defensive system: its disposition and depth, types of fire emplacements and fortified area boundaries.

The engineer and military geological reconnaissance work was above reproach. By July, when were fleshing out the operation, we had sufficient details on the kinds of natural obstacles our troops would have to negotiate in the main thrust sector and, consequently, we knew how to negotiate them also; we had an accurate idea of the disposition of centers of resistance and strong points and, consequently, we began to work on operations to attack them.

Reconnaissance is reconnaissance, but there were also other urgent matters. In preparing the offensive operation, the engineers, as always in such situations, organized jump-off areas and holding zones and they expanded and improved the road system. The only difference was the requirement to maintain operational deception Everything the combat and civil engineers engaged in had the appearance of defensive work. And, they did a lot: they laid 7 new roads with an overall length of 850 kilometers through the taiga; moreover, 2 of the roads were for army-level use; in addition, they repaired over 2,000 kilometers of roads.

They also built, repaired and reinforced bridges, dug shelters and covered trenches, set up command and observation posts and laid barbed wire entanglements. They made sets of devices to increase the cross-country performance of combat vehicles. At the same time, as always, they carried out persistent combat training. After the engineer units were brought up to full strength again, we were able to assign people so that units had both natives of the Far East and men who had fighting experience in the West. They transmitted this experience to their unseasoned comrades during drills and exercises.

The exercises were complex and included all the actions which would have to be accomplished in an offensive. Primary attention was focused on troop column movement along the bad roads and through the mountain taiga--after all, this was the only way to bypass the fortified areas, penetrate to the roads and straddle them.

We developed procedures for laying roads for an advancing division. The advance guard consisted of an officer reconnaissance team--the rifle regiment's deputy commander and assistant chief of staff, the combat engineer battalion's chief of staff and tank and artillery representatives--accompanied by a combat engineer and automatic weapons squad. The reconnaissance team's assigned duties were very important: to select and mark a route for all the division's traffic. Behind them was a point detachment consisting of two automatic weapons companies, a combat engineer platoon and reinforcements--up to five tanks. They laid the road marked by the reconnaissance: they felled the trees and cleared the underbrush. The combat engineers, assisted by infantrymen, cross cut the trees, pulled up the stumps, cleared them out of the way and laid brush wood where necessary. The combat engineers left a 5-meter wide march route behind them.

Then came the turn of the road-bridging detachment which consisted of up to four engineer-combat engineer battalions. It widened the clearing to 10-meters and laid a thick, two-lane corduroy road along it. It was also its responsibility to correct the defects in the road after the main body of the advance guard had passed along it.

Behind the advance guard were the division's main forces. In the lead was a combat engineer battalion serving as a traffic support detachment and behind it were the rifle regiments, the artillery and the tanks.

This procedure--which was developed with the active participation of our staff where a primary role was played by the operations officer, LtCol Ivan Nikolayevich Zabelin (our chief of staff was new and was just being brought up to speed)--anticipated a rate of advance of 10 kilometers per day. It was not very easy to support this. No matter how much we wanted to make it by just using the combat engineers in order to save the infantry's strength for battle, it was not possible: we needed at least minimal assistance from the rifle units. Therefore, the infantry was issued entrenching tools above the authorized standards and, so they would not be discarded or lost, special collection points were designated where the men were relieved of them when no longer required.

The traffic control service had to work like clockwork--otherwise, traffic jams and congestion would be unavoidable. The sole means of communication between the provost marshall road post was still by radio and firm skills alsohad to be acquired to ensure uninterrupted communications.

In short, the lessons came one after the other. It was important to strive for a situation where the men not only knew what to do and how to do it but also were able to function and give this road "conveyor belt" a precisely maintained rhythm.

At that time, the Front engineer staff was also working without let up. We had more manpower than ever before. Each army had an engineer-combat engineer brigade. Subordinate to the Front were 5 engineer-combat engineer brigades (including the 20th Svirskaya Brigade,an assault brigade), a pontoon bridge brigade, a heavy pontoon bridge regiment, several independent pontoon bridge battalions, three engineer motor pools and other units.

It was necessary to maximize the use of all these forces. No matter how many there were, there still were not enough to completely satisfy all engineer support requirements. After a lot of deep thought, we decided to concentrate the use of all the formations and units in the sectors of the armies thrust and to just keep one brigade and an engineer motor pool in the Front's reserve. The scope and nature of each army's mission were known and they would have to get down to business immediately; therefore, we decided on a proper distribution of forces at the very outset and not to maneuver reserves. Therefore, the staff would have to carry out very detailed preliminary planning.

Special attention was naturally focused on the forces committed to the main thrust sector. So, it was decided to reinforce the 1st Red Banner Army with the 12th Engineer-Combat Engineer Brigade, 2 pontoon bridge battalions, 2 engineer motor pools, a field water supply company and a water equipment company; and it was decided to reinforce the 5th Army with the 20th Svirskaya Assault Brigade and the 46th Motorized Engineer-Combat Engineer Brigade and 2 pontoon bridge battalions. Overall, the 5th Army's share was 90 combat engineer companies; other armies had 60-70....

We probably can't say that the men at headquarters worked without let up. They had periods of respite and extremely frequently--they visited the brigades and battalions to check up on how the pontoon bridgers were doing, how the obstacle teams were being trained and how the assault detachments and groups were getting ready. Thus, for example, Scout D. A. Krutskikh personally checked up to see how the new 20th Assault Brigade Commander Col A. I. Yefanov, was preparing two detachments to seize railroad tunnels.

Three of these tunnels were located a distance of 1 to 3 kilometers from our border on the CERR--the Chinese Eastern Railroad. It was along this road that one of the operational links of our offensive extended and it would not be able to bypass it: there were no routes around it. But, the tunnels--and this we knew precisely--were mined and the enemy could blow them up at any time. So, it was necessary to develop an operation to prevent the explosion.

The 20th Brigade was called an assault brigade because, like other similar formations, its mission was to attack fortified areas and heavily reinforced defensive zones. Its men were not combat engineers in the normal sense of the word: they were trained to wage all types of combat in the most difficult and unconventional environments and to destroy complex engineer works both on the front lines and in the rear. Therefore, we naturally decided to draw the detachments to seize the tunnels from it.

Each detachment included an engineer-combat engineer assault battalion, a man-pack flame thrower company, 2 automatic weapons platoons and an artillery observation team. During the operation, they would be supported by an armored train and two battalions of a Supreme High Command Reserve artybrigade One of the detachments was commanded by Maj V. I. Gurin and the other by Maj Yu. Ya. Yankevich. While preparing for their mission, they worked their assault team members to the bone in training in an area where we had tunnels similar to the ones they would have to seize and protect against destruction....

By the end of July, troop training for the operation was basically completed. "Basically" because there is no end to improvement and it always seems that it would be good to extend training, if not for a month then at least for two weeks. But, we felt that things were coming to a head and there was only a few days to wait. Our Front's operational sectors were still just penciled-in arrows stretching to Kharbin, Girin and along North Korea's coast to Kansong and Pyongyang. In the center of the Front were the 1st Red Banner Army and the 5th Army which made up its battle group. The Red Banner Army was commanded by ColGen A. P. Beloborodov and the 5th Army was commanded by ColGen N. I. Krylov (and, so, I met up again with Nikolay Ivanovich after Sevastopol' and Odessa where he was in charge of the Maritime Group's Headquarters!). These armies would have to penetrate the mountain taiga and take two fortified areas: one would take the Mishansk fortified area and the other the Pogranichnenskiy fortified area.

On the right flank, north of Lake Khanko, was LtGen N. D. Zakhvatayev's 35th Army. Its troops faced the deep Ussuri and, beyond it, marshy forests and the Khutouskiy fortified area. Located on the left flank, ColGen I. M. Chistyakov's 25th Army's route was obstructed by mountain forests and four fortified areas: Dongning, Dongxingzhen, Hunchong and (Kenhin).

It was 8 August. The radio carried the news about Japan's declaration of war. The armies were frozen in tense anticipation. As the saying goes, the artillery men were holding their landyards.

On the whole, the artillery men were holding their landyards in vain. There was no artillery preparation in the zone of the 1st Red Banner Army which kicked off the operation. And, it had been beautifully thought out: illuminated by powerful search lights like the attack on the Berlin bridgehead. But, before midnight, there was such a violent, unrelenting downpour that both the search lights and the artybde preparation had to be forgotten. At 0100 hours on 9 August, the advance units silently went into the attack and moved through the reconnoitered sectors.

But, the tunnel seizing detachments got down to work even earlier in the 5th Army's zone. At midnight, they crossed the border. At the signal, they simultaneously began fighting. Yankevich's and Gurin's assault groups rushed to the tunnels from all directions. At the same time, there were attacks on the guard posts barracks. At the same time, demolition teams, having moved 100-150 meters away from the tunnel, began mining the railroad in case armored trains approached from Manchuria's Border Station.

After a successful, fast-moving battle, the tunnels were cleared of mines and put under guard while part of the assault teams mopped up the border station and secured it. The detachments destroyed 10 earth-and-timber emplacements and 2 barracks, killed 14 enemy soldiers and took several officers prisoner. Our side suffered 15 wounded.

The 5th Army's route along the CERR had been cleared.

During the first days, the assigned rate of advance was maintained or even exceeded in all sectors. And, although it poured down rain the entire night, which delayed an already difficult job, the "road conveyor belts" were primarily functioning well--the troops were moving behind the tree-felling tanks at a speed of half a kilometer an hour. Naturally, not everything went smoothly everywhere. The ground under the tank-track stripped layer of soil immediately swelled, turning into quicksand. It was necessary to reinforce the road as quick as possible with a thick cordoroy road and, then, after the first units passed through, it was necessary to recondition it. Therefore, in several sectors, primarily in the zone of advance of the 1st Red Banner Army and the 5th Army, it was necessary to make several organizational improvements on the move. They boiled down to even greater centralization of engineer forces. All these steps were taken very efficiently: representatives of our staff were moving with the advancing units.

However, laying column routes through the deciduous thickets which the enemy thought were impassable for heavily equipped troops was just the prelude to the fighting for the fortified areas and centers of resistance. After all, the movement over the mountains, through the taiga and swamps facilitated but did not at all rule out an assault on the defensive belts and weapons emplacements. And, as I already said, the enemy was fanatically embittered and persistent. It turned out that after they were dislodged from a strongpoint, the Japanese reoccupied the pillboxes and earth-and-timber emplacements as soon as they were in the rear of our advancing forces.

The assault units were called upon to accomplish the most difficult, important missions when the fortified areas were penetrated and when individual defensive installations were sealed off and destroyed. The composition of the assault units was not the same in all armies. Thus, in the 1st Red Banner Army and the 5th Army, the division first echelon regiments organized assault groups: an assault combat engineer platoon, 2 flame thrower teams, 2-3 rifle squads, 2 machinegun squads, an anti-tank gun squad, 2 45-mm guns, an 82-mm mortar squad and 2 SAU-152 assault guns. The 25th Army and the 35th Army did not establish assault groups but rather assault detachments--each one consisted of a reinforced rifle company. These differences were due to the environment in which the assault units had to operate and to the terrain features of the fortified areas along the attackers route. For example, N. I. Krylov's army attacked the Pogranichnenskiy fortified area where it had to seize the 360-degree defended strongpoints of Xiaotianmai and Camel Hill. It was not possible to approach them unnoticed. So, this dictated the nature of the operations. The assault groups rushed forward after the artybde preparation, under the cover of gun and mortar fire. After all the pillboxes were seized or sealed off, the infantry came up and, after seizing the line, secured it. Then, demolition teams systematically destroyed all the offensive installations.

In the zone of advance of I. M. Chistyakov's and N. D. Zakhvatayev's armies, the fortified areas were disposed so that the majority of the pillboxes could only be approached secretly by using the enemy trenches. This was taken into account when the assault detachments were organized and prepared and it determined their operational tactics. After fighting their way to the installations, the attack and blocking subgroups covered the embrasures with sandbags. The pillboxes were "blind" and "deaf." Then, the men destroyed the bars covering the ventilation pipes and tossed hand grenades and anti-tank grenades into the pillboxes.

After being sealed off, the pillbox garrison usually took cover in underground shelters. In order to smoke them out, they used flame throwers, explosives, kerosene and gasoline.

Finally, in a number of cases, a team was organized for a surprise attack. The detachment had to penetrate to the strongpoints silently at night, take out the sentries with cold steel, get to the installation's vulnerable points, break into it, throw grenades at the enemy, destroy them with automatic weapon and machine gun fire and then blow up the pillbox.

These operations were also extremely effective. For example, after crossing the mountain taiga, one of the 25th Army's detachments encircled a strongpoint on Officer's Hill. The assault groups crawled up to the pillboxes while an automatic weapons company attacked the barracks, demolished it and destroyed half the garrison. The soldiers who were still alive were not able to get into the pillboxes since they had already been sealed off by the assault groups.

But, war is war. And, if the enemy is strong and fierce, war is never a complete triumph. Not everything went according to plan. The slightest under-evaluation of the enemy and attempts to act rashly or without the appropriate preparation led to failure.

An assault detachment from the same 25th Army secretly encircled and, at 0100 hours on 9 August, began to attack an enemy strongpoint which was called Horseshoe on our maps. By 0600 hours, it was seized. [illegible] the command post and 10 armored cupolas were destroyed and about 50 [illegible] and soldiers were killed. However, the majority of the pillboxes remained intact. The large garrison sheltered in them put up a stubborn, persistent resistance. The battle lasted through the 9th and 10th of August and the assault detachment had to withdraw.

Trying to quickly get even with the enemy and relying on the strength of our men's aggressive spirit, the detachment commander ordered a renewed assault at dawn on 11 August. The assault was not preceded by thorough reconnaissance or by additional preparation of the assault groups. The attack also was not preceded by an artillery strike. As a result, the detachment again had to withdraw with its casualties to its initial positions.

The next day, another assault detachment and the 114th Combat Engineer Battalion were moved up to the Horseshoe. The lesson had been learned: there was solid artillery preparation to neutralize the strong point. The combat engineers conducted engineer reconnaissance of the system and composition of the intact installations. Artillery support [illegible] them up with fire. Meanwhile, the assault groups were reorganized and trained.

At 2000 hours on 13 August, they attacked the northern slopes of Horseshoe Hill. The pillbox garrisons put up furious resistance. The assault groups slowly advanced and sealed off the weapons emplacements by midnight. After forcing the Japanese out of the communications trenches and trenches, the automatic weapons units occupied them. During the night, the assault group combat engineers destroyed four pillboxes and the men manning them. But, there were still others. The slow destruction of each of the pillboxes lasted several more days and it was only on 19 August that Horseshoe Hill was completely clear of the enemy.

No, there was no easy victory march in this war for us! We paid for the victory in the Far East not just with the soldiers' sweat but also with their blood, which was doubly precious after the victory over Hitler's Germany.

Our Front CP was located in the [illegible] near Grodekov. But, I wasn't there very much; most of the time, I was with the troops. On the morning of the 9th, I was checking up on how Beloborodov's army was operating the "road conveyor belt." Before my eyes, they laid 1 1/2 kilometers of road. Noticing several deficiencies in work organization, I ordered that they be corrected. The next day, I went to Mudanjian--the first major city on our battle group's route. The offensive had slowed down here and the commander sent me to dig into the reasons for it. There were enough reasons for it: the strength of the enemy's fortifications, the flooding--although small, it had interfered with the offensive a good deal--and the reinforcement of the Mudanjian group with frontline reserves....

After my report, K. A. Meretskov decided to turn the main body of the 5th Army to bypass Mudan'tszyan to Girin and to assign capture of the city and a subsequent advance toward Kharbin to the 1st Red Banner Army. At the same time, the 3 Corps, which reinforced the 25th Army, was moved to Girin. In general, events on the Front's left flank where this army was operating were developing dynamically. On 11 August, Pacific Ocean Fleet sailors landed a reconnaissance group in the Korean port of Yuki (Unggi). The next day, the main body of the assault landing force was lifted to Yuki. At the same time, an assault landing was underway at the next port--Rasin (Najin)--and 24 hours later, there was an assault landing at Seysin (Ch'ongjin). Units of the 25th Army rushed to the assistance of the assault landing forces whose reinforcements were being sealifted. The Kwantung Army's path of withdrawal to the mother country was cut off.

The news of these assault landings evoked memories of long ago, but unforgettable, events: Feodosiya, the ships which were audaciously breaking into the port occupied by the enemy and the battalions which landed right at the mooring docks.... The chain of association did not end here. I thought about Kharbin and Girin--the major objectives of our offensive. Finally, I had an idea that I took to Meretskov.

"I have an idea, Kirill Afanas'yevich, for a swift capture of Kharbin and Girin."

"That's interesting! Give me a report on it."

"We should immediately prepare airborne assault forces and land them there."

"Didn't you know that we don't have any airborne regiments?"

"That's just it. We won't need any paratroopers. We have enough transport aircraft. The assault forces will be landed right at the airfields--after the aircraft land. We'll achieve total surprise."

"What are you saying!" quickly responded Meretskov in his way. "You didn't say this would be a risky venture."

"Why risky? I have already made some estimates...."

"No, no," the commander concluded. "Let's not...."

However, two days later, when the main group had only advanced 50 kilometers, Meretskov summoned me.

"Well, Arkadiy Fedorovich," he asked as though nothing had happened, "are your assault forces ready?"

"They are being readied, comrade commander, under the direct supervision of LtCol Zabelin," I answered.

"Well, that's good. In a few days, they may come in handy. If the Japanese blow up the bridges across the Sungari at Kharbin and Girin, our troops will have to mark time there for a long time. Therefore, the mission of the assault landing forces will be to seize the bridges and keep them from being destroyed. Get your men ready and wait for the command...."

From that time on, the training of the assault landing forces became very specific in nature. Among ourselves, we dubbed the forthcoming operation, Operation Bridge.

Of course, the assault forces were organized within the 20th Assault Brigade. Each force consisted of 150 men. These were hand-picked, tested assault combat engineers, primarily picked from the men who had participated in the capture of the tunnels. They were armed with automatic weapons, machine guns, flame-throwers, grenades and explosives. The detachments were also equipped with North radios.

Each man received a city map with the routes from the airfield to the bridges and other major objectives marked on it. During lessons with the assault force teams, officers from the Front Intelligence Directorate and translators thoroughly, right down to the slightest detail,anticipated all the possible options. Radio communications were scrupulously worked out.

On the 16th, Mudanjian finally fell and the 1st Red Banner Army moved toward Kharbin. Two days earlier, the Japanese government decided to surrender but the order to cease military operations had not been received by the troops and the Kwantung Army continued its resistance. Its headquarters requested the Soviet command stop its offensive but they did not back up their promise to lay down their arms. On 17 August, the CINC, A. M. Vasilevskiy, gave his answer in a radiogram to the Kwantung Army commander O. Yamada: "I propose...that at 1200 hours on 20 August you cease all military actions against Soviet forces along the entire front, lay down your arms and surrender.... As soon as Japanese forces begin to surrender their weapons, Soviet forces will cease their military operations." But, the enemy did not surrender.

On 18 August, the Front headquarters decided to begin Operation Bridge. The detachments were loaded on to the aircraft. The first detachment was commanded by I. N. Zabelin himself; with him was the Front War Council representative MajGen G. A. Shelakhov, who was authorized to conduct talks on the surrender with the enemy command element. The second detachment was commanded by D. A. Krutskikh; the War Council was represented by Guards Col V. I. Lebedev.

In the afternoon, the transports took off. They were covered by fighters and accompanied by bombers. The first detachment headed for Kharbin and the second headed for Girin. At approximately 1900 hours, both detachments landed safely at their designated spots. Their appearance was so unexpected that the enemy did not put up any resistance. The airfield security scattered. After jumping out of the aircraft, the assault teams seized the airfields, all the facilities and services.

As Ivan Nikolayevich Zabelin recalled later, "Soon after touch down, LtGen Hata, chief of staff of the Kwantung Army, and a group of generals and officers were taken prisoner. He was taken to the Soviet Consulate where MajGen Shelakhov handed him the ultimatum to surrender. Gen Hata was also told that if he refused, the airfield and Japanese troop dispositions would be subjected to a destructive bombardment.

"By the time of the talks, the assault teams had already seized the bridges and, at 2300 hours, they were in complete control of the city after taking the railroad junction, the telegraph office, the police station, the postal facilities and other objectives. They acted swiftly and decisively. The following especially distinguished themselves: SrLt I. Kulak, Capt A. Stroganov, MSgt's N. Romanov, G. Mal'gin, [illegible] Prokof'yev, G. Cangusov and Pvt [illegible] Yumashev. The assault teams were given a great deal of assistance by the residents of Kharbin. They caught Japanese soldiers and officers, showed our men the locations of command and communication centers, headquarters, and military industrial facilities and kept the occupying forces from evacuating or destroying valuables."

This is approximately how things went in Girin too--the enemy was already demoralized and was not able to put up a well-organized resistance. Gradually, the Japanese began to surrender. Not everywhere, not at the same time, but the surrender had essentially begun. Things were coming to an end...

The next day, I flew to Mudanjian and, from there, on to Kharbin. I was met there by Ivan Nikolayevich Zabelin and my favorite army lieutenant, my son, Lt Petr Khrenov; he was also a member of the assault force.

Right then, in Kharbin, embracing my son, it seemed as though I felt for the first time that both the Great Patriotic War and World War II were behind me. I was overwhelmed with joy. We experienced this joy 3 1/2 months later than those who ended their fighting on the battlefields of Europe. Well, we were like the words of the song, "And, we finished our campaign in the Pacific."

There were still bursts of fire from enemy garrisons which had not received the order to surrender and the frenzied prisoners were still blowing themselves up while we were already thinking about where and how to raise things from the ruins, refurbish them and rebuild. In fact, we were beginning to evaluate the results.

With a feeling that we had fulfilled our duty, professional military men like me were able to state that the engineers passed all the combat tests with high marks by establishing a firm defense and by laying bridges to the victory of the infantry artillery men and tankers. Engineer thought, which was cross-fertilized by the advanced Soviet art of war, made an important contribution to the theory and practice of armed conflict and enriched strategy, operational art and tactics. We had something to be proud of; but, this did not give us the right to let up. The people of the world were rejoicing and celebrating victory; but, the echo of the atomic explosion at Hiroshima and Nagasaki reached us and, soon afterwards, Churchill made his infamous speech at Fulton.

The first steps toward a new frontier--the development of mobile, highly mechanized engineer forces with advanced equipment, the improvement of engineer standards in all the Armed Services and enhanced engineer defense of the nation--were taken immediately after the end of the war. Years passed. Under the leadership of the communist party--which taught us not to forget any of the experience we had gained and, at the same time, not to forget past mistakes and errors too--this frontier was reached in a brilliant manner.

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MINE-CLEARING DEVICES DESCRIBED IN GERMAN JOURNAL

Frankfurt/Main SOLDAT UND TECHNIK in German No 7, Jul 80 pp 376-377

[Article by Lt Col Guenter Lippert: "The Soviet Attached Mine-Clearing Devices"]

[Text] The Soviets place great emphasis on clearing mines in order to support a high rate of attack. In addition to bangalore torpedoes and rocket-deployed explosive cords, particular use is made of mechanical clearing devices which can be attached to the bows of tanks. These devices either detonate mines by the pressure of heavy metal rollers or are use to lift and clear mines from the track rut by plowshares. The mines remaining between the track ruts are cleared by combat engineers as soon as the lead elements of combat troops have passed the barriers. Explosives are usually used in this case.

The most significant advantage of attached mine-clearing devices is that the tanks equipped with them can be used in the combat formation and mines can be cleared under armor protection without any additional forces. The Soviet Army developed the first such roller mine-clearing device during World War II. It was first tested on the T-34 tank in 1943 and was called "tral" or "tralchik" [from the English "trawl"] by Russian soldiers. The series-produced device developed from this was given the designation PT-3 and was in use until the early 1950's.

The basic design of this roller clearing device was also retained in its replacements. It consists of a thrust frame fastened to the front of the tank bow with two clearing roller units driven by the tracks and attached to this frame. The roller units have a certain amount of vertical and horizontal play so as to adjust to terrain forms. Also the individual rollers of the roller units have a large amount of play on the roller unit axle and can thus adjust to very small ground differences. The loose suspension of roller units and individual rollers also decreases the danger of damage from detonating mines. The rollers can withstand up to ten detonations and can be rapidly replaced individually or as a unit.

The PT-3 mine-clearing device was initially replaced with the PT-54 roller mine-clearing device or with the improved PT-54M version. They were then followed by the PT-55 (Figure 1) [not reproduced] which became the standard roller clearing device of all Warsaw Pact armies and is still in service today in some non-Soviet Warsaw Pact countries. All postwar models were equipped with a device to detonate trip fuze-equipped antipersonnel mines between the track ruts. This consists of a chain which is passed over the ground by up to three metal cylinders. The roller clearing devices also include two plow-like tracing devices mounted on the rear of the tank. At night the furrows can be marked with light signals.

The PT-54, PT-54M and PT-55 devices differ primarily in the number of rollers, with the six per unit of the PT-54 being reduced to five per unit for the PT-54M and four per unit for the PT-55. This resulted in smaller track ruts but the weight reduction achieved thereby increased tank clearing speed and mobility (see table).

Roller clearing devices provide no protection against mines not detonated by pressure or whose pressure fuzes function with a delay. They also easily fail to function in sand and other light soils and deep snow. The rollers do not turn but simply shove the sand or snow around. Here the mines can be pressed to the side and land next to the track ruts or under the tracks.

At the end of the 1960's the Soviets began to replace their existing roller clearing devices with a plowshare mine-clearing device, the KMT-4 [koleynyy minnyy tral = rut mine clearing device]. This device consists of two 60-centimeter wide and 420-kilogram heavy plowshares with five knife-shaped digging teeth on their forward edge. The plowshares with their mount are attached to posts on the lower bow front plate and on the hubs of the track idler wheels. When clearing they rest in front of the tracks so that the mines picked up by the digging teeth are shoved to the side by the plowshares which are angled to the outer side. The digging teeth are pressed into the ground by individual hydraulic levers. A guide runner prevents excessively deep penetration. When changing to the travel position, the plowshares are lifted by the hub supports which are configured as hoist gear and held in the upper position by a lever fitted with a lock (Figure 2) [not reproduced].

The plowshare clearing devices, being much lighter than the roller clearing devices, have very little effect on tank cross-country or fighting ability. They are particularly suitable for use in lighter soils and also clear mines having fuzes not responding to pressure or functioning with a delay.

Because of these properties, three KTM-4 devices belong to the standard equipment of all Soviet tank companies. They are intended to make companies capable of overcoming mine barriers without delay with their organic equipment. Clearing speed depends on ground strength and is about six kilometers per hour. The KMT-5 mine-clearing device was introduced to supplement these light plowshare mine-clearing devices. This device consists of the KMT-4 plowshares and a new roller clearing system. This has an improved thrust frame construction and two roller units with three rollers each. As with the older devices, the unit includes a clearing device for mines with tilt fuzes and tracking units (Figures 3 and 4) (Figure 3 not reproduced).

The KMT-5 is bulkier and, with a total weight of about 7,500 kilograms, considerably heavier than the KMT-4 but offers — depending on terrain, soil and mine type — a choice between the roller and plow system. Given appropriate ground and terrain conditions, both systems can also be operated simultaneously and thus combine the advantages of both systems.

The KrAZ-214 truck was originally used to transport mine-clearing devices but has since been largely replaced by the 7.5-ton (6x6) KrAZ-255B. This truck is equipped with a crane to load and unload the devices and to mount-dismount them on tanks.

The prerequisite for mounting KMT-4 and KMT-5 devices on tanks is attachment posts on the upper and lower side of the bow front plate with the devices being screwed on to these posts. About 15 to 20 percent of all T-54/55 and T-62 tanks are equipped with these posts. Such posts seem to be series-mounted on all new T-64 and T-72 tanks. The two upper pairs are easily recognizable on both sides of the V-shaped deflector strip.

Despite all technical progress, mechanical mine-clearing devices are evidently still an effective clearing means today. An hydraulically releasable roller clearing device similar to the KMT-5 recently went into series production for the U.S. Army.

Technical Data on Attached Mine-Clearing Devices*

	PT-54	PT-55	KMT-5
Total weight (kg)	8,800	6,700	7,500
Total number of rollers	12	8	6
Individual roller weight (kg)	500	500	500
Width of cleared rut (m)	2x1.3	2x0.83	2x0.81
Clearing speed (km/hr)	6-10	8-12	8-12
Assembly time (min)	10-15	10-15	10-15

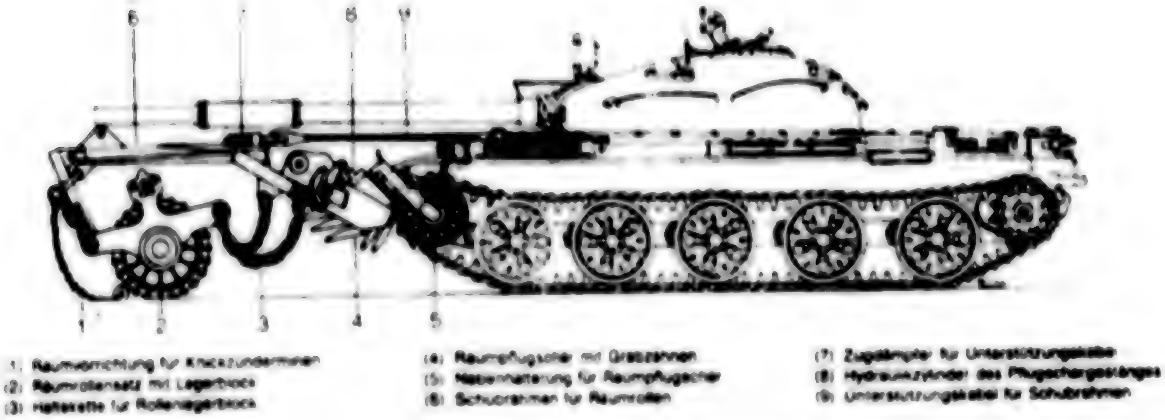
*see text for data on KMT-4 plowshare clearing device

PHOTO CAPTIONS

1. p 376 PT-55 roller mine-clearing device on T-55 tank.

2. p 376 KMT-4 plowshare mine-clearing device on T-54 tank.

3. p 376 KMT-5 combined mine-clearing device on T-54 tank.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(1) Räumvorrichtung für Knickzünderminen
(2) Räumrollensatz mit Lagerblock
(3) Haltekette für Rollenlagerblock
(4) Räumpflugschar mit Grabzähnen
(5) Nabenhalterung für Räumpflugschar
(6) Schubrahmen für Räumrollen
(7) Zugdämpfer für Unterstützungskabel
(8) Hydraulikzylinder des Pflugschargestänges
(9) Unterstützungskabel für Schubrahmen

Fig 4. KMT-5 Mine-Clearing Device on T-62 Tank

Key:

1. Clearing device for trip-fuze mines
2. Clearing roller unit with support block
3. Retaining chains for roller support block
4. Clearing plowshare with digging teeth
5. Hub mount for clearing plowshare
6. Thrust frame for clearing rollers
7. Baffle for support cable
8. Plowshare rod hydraulic cylinder
9. Thrust frame support cable

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BRIDGE-LAYING EQUIPMENT DESCRIBED IN [illegible]

Frankfurt/Main SOLDAT UND TECHNIK in German No 7, Jul 80 pp 377-378

[Article: "Soviet KMS and MTU Bridge-Laying Devices"]

[Text] Overcoming water obstacles plays an important role in the Soviet military concept of warfare based on rapidly following attack operations over wide areas. This is reflected in the high percentage of combat and combat support vehicles capable of swimming, the fitting of all tanks with snorkels and the multitude of floating bridge devices, ferries and amphibious vehicles in the combat engineer formations. In this case the attack plan calls for the water crossing to be forced by motorized rifle troops — supported by artillery and combat helicopters — with the help of boats, amphibious vehicles and armored personnel carriers capable of swimming. These are then followed by ferries for weapons not capable of swimming and tanks either wading deep or crossing underwater and finally floating bridges are laid so that the masses of forces can cross. As soon as the first echelons of the attack formations have developed the attack sufficiently, mobile crossing equipment is supplemented by permanent bridges so as to have available the required number of crossing points to bring up the second echelon, bring forward supplies and evacuate the wounded and damaged materiel. The mobile crossing equipment is finally replaced completely by permanent wartime bridges so as to be able to use the first again to continue to attack across other waters.

For the rapid construction of permanent shallow water and underwater bridges, the combat engineer formations belonging to the "Military Transportation Troops" have available prefabricated pile spans, crossbar spans and bridge girder assemblies. They are also equipped with KMS [kompleks mostostroitel'nykh sredstv = bridge-laying set] bridge-laying sets or with multipurpose bridge-laying machines. About 20 running meters of shallow water bridge per hour can be laid with a KMS set. This set includes:

- a pile-driver raft
- a winch raft
- an auxiliary boat
- ZIL-131 transport vehicles.

Piles for the bridge spans are driven into the bed from the pile-driver raft. This consists of four pontoons from the TPP [tyazhelyy pontonnyy park = heavy pontoon park] pontoon bridge device. The pontoons are joined with telescoping supports which can adjust the length of the pile-driver raft to the support width of the bridge to be laid. The pile driver assembly is mounted on the two front pontoons which are used as forward sponsons. It consists of four diesel pile drivers mounted on beams. The pile drivers are powered by two-stroke diesel engines which can deliver 100 driving strokes per minutes with a force of 180 kilograms. The two rear pontoons are used as center sponsons. They carry structural members such as spans and beams and construction equipment. The equipment includes two cable winches, a mountable working platform and power saws. Each pontoon is transported with associated equipment on a truck which has loading and unloading equipment. The pile driver beams are hinged in this case (Figure 1) [not reproduced].

The winch raft is used to place the carrying structure on the bridge spans. It consists of two boats having outboard motors and joined by telescoping beams. Four rack-and-pinion winches are mounted on the beams which can carry two bridge spans. If bottom conditions require that the bridge be laid with cross rather than pile spans, a device to pick up and place the crossbar spans can be mounted on the winch raft.

The auxiliary boat of the KMS set is used to transport elements to the construction site, to ferry bridgebuilding combat engineers and for various auxiliary operations. On wide bodies of water bridge laying with KMS sets can be done simultaneously at two, three or even four sites.

The KMS set cannot be used for bridge laying across waters with low banks and sand banks because the rafts and boats have no freedom of movement. The USM [ustanovka stroitel'stva mosta = bridge-laying device] is used to lay bridges across such waters. This moves forward during construction on the already completed parts of the bridge (Figure 2) [not reproduced]. The transport vehicle is a KrAZ-255B 7.5-ton 6x6 truck with a payload of 8 tons and an engine output of 176 kW (240 hp). The bridge-laying device consists of the pile driver assembly, the working platforms and the auxiliary devices.

The pile driver assembly and working platforms are attached with hinges to an extendable platform which lies between the beams of the chassis. Hydraulic supports which increase the stability of the laying assembly are mounted on the chassis (see diagram sketch). The pile driver assembly is similar to that of the KMS set. Two working platforms are mounted on the four pile driver beams. The pile driver operators work on the upper platforms and the combat engineers laying the span work on the lower ones. These lower platforms can be raised or lowered with hand cable winches.

The transport vehicle is equipped with an hydrualic crane to deploy and retrieve the bridge-laying assembly and to place construction members. In the normal position its telescoping boom has a length of 5.5 meters or 7.5 meters when deployed. Its carrying capacity is 2.5 or 2 tons. The bridge-laying assembly crew, the necessary spare parts and the fittings needed for bridge laying are transported on a second vehicles.

PHOTO CAPTIONS

1. p 377 KMS bridge-laying set. The forward pontoons with two hinged pile driver beams on transport vehicle.

2. p 378 USM bridge-laying device on KrAZ-255B truck in action.

3. p 379 USM bridge-laying device

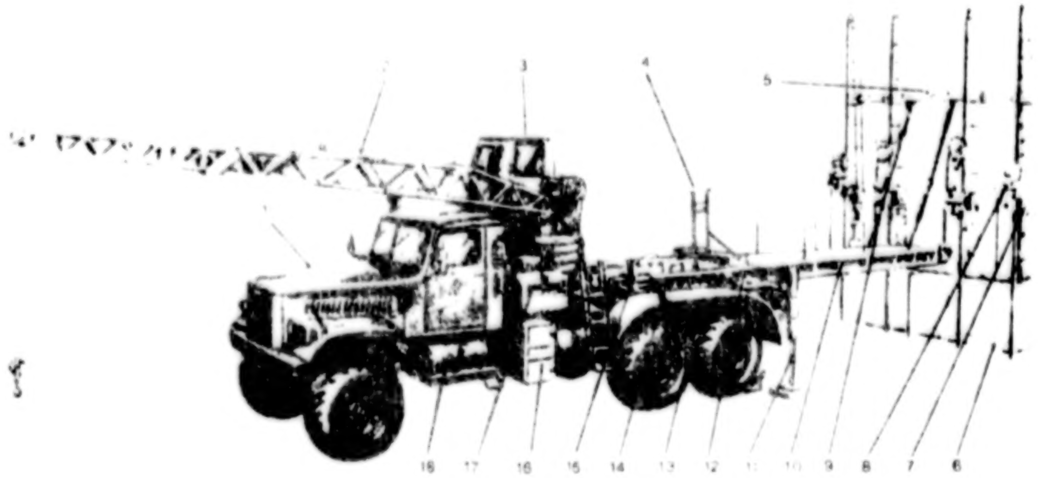

Bild 3 Brückenbau-Vorrichtung USM

(1) Trägerfahrzeug KrAZ-255 B
(2) Kranausleger
(3) Kranführerkabine
(4) Stütze für Kranausleger
(5) Verstrebung der Rammenträger
(6) Untere Arbeitsbühne
(7) Rammblock
(8) Diesel-Ramme
(9) Stützstreben für Rammvorrichtung
(10) Ausfahrbare Plattform
(11) Stützausleger
(12) Transporthalterung für Diesel-Ramme
(13) Blockierungsmechanismus für Hinterradfederung
(14) Fahrgestellrahmen
(15) Transporthalterung für Verstrebung
(16) Werkzeugkasten
(17) Schmierstoffbehälter
(18) Kraftstofftank

Key:

1. KrAZ-255B transport vehicle
2. Crane boom
3. Crane operator cabin
4. Crane boom support
5. Pile driver beam brace
6. Lower working platform
7. Pile driver assembly
8. Diesel pile drivers
9. Pile driver assembly support branch
10. Extendable platform
11. Support boom

[key continued on following page]

12. Diesel pile drivers transport lock
13. Rear wheel suspension blocking mechanism
14. Chassis frame
15. Transport lock for brace
16. Tool box
17. Oil tank
18. Fuel tank

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